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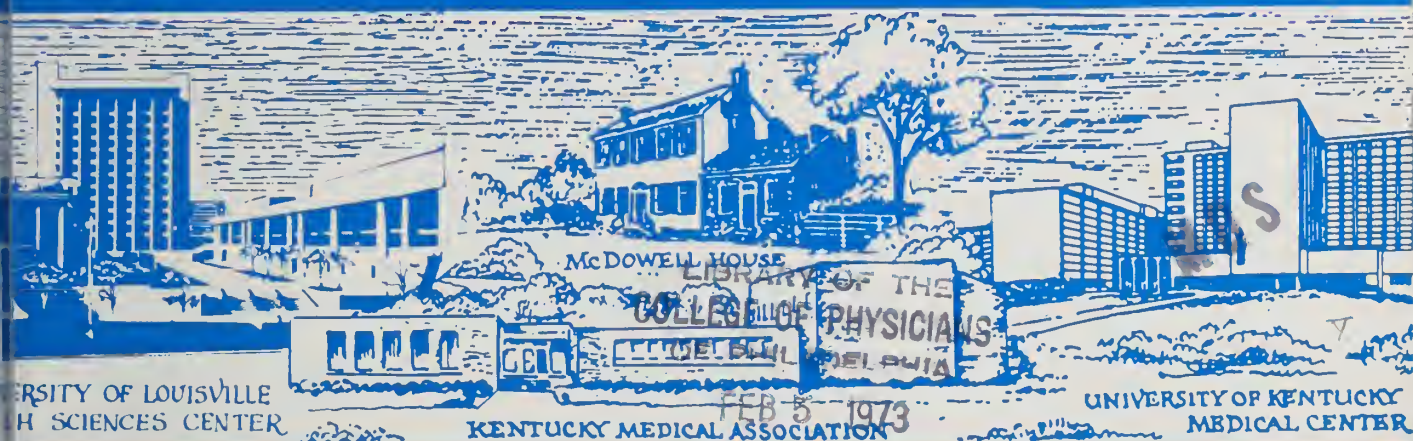
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*The Journal of The*  
**KENTUCKY**  
*Medical Association*



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1973 KMA INTERIM MEETING

March 29-30

Lake Barkley, Cadiz



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and a few may need counseling  
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**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anti-convulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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JUN 14 1976

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Volume 71 • January 1973

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# Journal of The KENTUCKY Medical Association

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# MESSAGE FROM THE PRESIDENT



**T**HE Kentucky Foundation for Medical Care is in its second year of existence and is seeking to establish itself as the socio-economic arm of KMA. Foundation policies are being developed to help us keep abreast of our ever-changing times.

Within the past several months important health legislation in the form of the Social Security Amendments of 1972, Public Law 92-603, including PSRO, was passed by Congress. This legislation is to become effective in January of 1974, and its full impact is discussed elsewhere in *The Journal* by the Claims and Utilization Review Committee Chairman, W. Neville Caudill, M.D.

The Committee on Medical Education of the Foundation is in the process of developing plans to submit guidelines for continuing medical education for all KMA members. It is hoped that these guidelines will be consummated by March of 1973, so that they can be brought to your attention for approval or disapproval.

The Committee for Health Insurance Standards is working towards a model minimum health insurance form. The Health Care Delivery Committee is studying alternate methods of health delivery throughout the Commonwealth. The Committee on Allied Health is compiling data for the Foundation in an effort to bring about centralization of thinking of the many allied health fields.

The year 1972-73 is a crucial one for medicine in the socio-economic field and your Kentucky Foundation for Medical Care is assuming a significant role on your behalf.

DAVID A. HULL, M.D., PRESIDENT  
KENTUCKY FOUNDATION FOR MEDICAL CARE

# A Committee Reports . . . . .

## The Third National Conference of State Medical Association Representatives on Continuing Medical Education

E. C. SEELEY, M.D., CHAIRMAN  
COMMITTEE ON CONTINUING EDUCATION

**T**HIS conference dealt with the status of Continuing Medical Education, the directions and trends evolving in continuing education and the experiences of the different state societies with various innovative programs.

Workshops were held on Peer Review as an Educational Necessity, the Accreditation of CME by State Medical Associations, CME as a Requirement for State Medical Association Membership and Self-Assessment.

*Peer Review* — There was perhaps less agreement on this subject than any other in regard to definition, how much and in what way peer review represented an educational concept and the directions it should and probably would take. However, the major theme that continuously surfaced was that peer review began and is still largely being practiced today with the chief concern being the cost of medical care rather than the quality of medical care. There was a feeling voiced by many that the emphasis by those outside the profession would remain on cost regardless of the amount of lip service they paid to upgrading quality and improving patient care.

There was no state represented that had any plans in approaching remedial education in the manner in which the Claims and Utilization Review Committee of KMA has proposed. Unfortunately, although this was reported in each of the workshop sessions I attended, there appeared to be little interest in our approach to this concept.

*Accreditation of CME by State Medical Associations* — The AMA Department of Continuing Medical Education is well-launched on a program of accreditation and the response has been so great that the Advisory Council to the AMA has felt the need to delegate to the state associations the responsibility for in-state programs, not only to spread the workload but also to encourage the societies to assume an ac-

tive role in encouraging their members to keep up.

During the past year more than 30 state societies have either initiated programs or are making plans. The Council on Medical Education of AMA has approved eight state medical associations for accreditation of organizations or institutions sponsoring intrastate CME programs.

*CME As Requirement for Association Membership*—Generally, the majority of opinions expressed were against CME being made compulsory; however, those representing the states where it is already mandatory did not agree that it posed any problems after the initial resistance had been overcome.

An announcement of note was made by Rutledge Howard, M.D., of the Department of Continuing Medical Education of the AMA, that the Joint Commission on Accreditation of Hospitals adopted a rule in 1970, that a hospital (complying with minimum standards) will have a CME program or that the staff document that they are keeping up. His information had it that the JCAH will start enforcing the rule this year.

*Self-Assessment*—This workshop involved participation in a demonstration in current educational methods and experiments at the University of Illinois Center for Education Development. Self-Assessment in its various forms was recognized by most as a valuable educational modality. It was emphasized that examinations as a form of self-assessment should be devised and utilized as a learning experience rather than a certifying mechanism.

It was the feeling of the representatives from KMA that the conference was of considerable value and interest. That it was topical and timely, was exemplified by the fact that three of the subject topics have been under implementation or discussion by the Association and/or its Committee on Continuing Medical Education.



# *The Kentucky Foundaton for Medical Care*

"If We Don't Do It Ourselves,  
Someone Else Will Do It For Us . . ."

**W**ELL, they have . . .

H. R. 1, now law, includes a section **mandating** the establishment of Professional Services Review Organizations (PSRO) nationwide to monitor the quality, appropriateness and necessity of medical services rendered to beneficiaries of federal health care plans. This includes Medicare, Medicaid and total disability recipients. (In the near future, I think we can anticipate that many more people will be recipients of federally subsidized "health care.")

The law is mainly concerned with **utilization** of services. Specifically, payments will be made *only* when such services are "medically necessary", and, in the case of in-patient services, **"cannot be provided on an out-patient basis** or more economically in an in-patient facility of a different type" (e.g., ECF).

The law also stipulates that, if a medically organized PSRO is not established and effective, HEW may designate "another public, non-profit private or *other agency or organization*" as PSRO for the state.

The Kentucky Foundation for Medical Care, through its state and trustee district peer

review committees, is addressing itself to the task of becoming the required PSRO for the state. By using existing hospital utilization review committees and incorporating them as integral parts of the trustee district review committees, *we hope to keep all peer review activities primarily at the local level.* District and state committees will provide necessary monitoring, appeal mechanisms and administrative support.

This year the KMA House of Delegates dissolved the KMA Advisory Committee to Blue Cross. This Committee has had the responsibility of reviewing claims for services covered under Blue Cross contracts (i.e., need for hospitalization, length of stay, etc.). Thus our state-wide peer review system now must also assume this function.

These new obligations will be burdensome, but they will also be a challenge and an opportunity to prove that Kentucky physicians can effectively manage their own affairs and provide honest and efficient supervision of "health care delivery."

W. Neville Caudill, M.D., Chairman  
Claims and Utilization Review Committee

# A Link in the Chain

u

## SEX

x

Now that I have your attention, Doctor—  
Please don't turn this page, until you've read it.

i

Dear Doctor,

We NEED your wife as a member of the auxiliary—and we WANT her. Our potential membership for the auxiliary is around 2475. Our membership last year numbered 1283. So you see, we've got a long way to go—and we need your help. Where else can you find women who all have something in common—an interest in medicine—because of you, their husbands. We are a unique organization striving to:

e

1. Assist the Kentucky Medical Association in its program for the advancement of medicine and health education.
2. To coordinate and advise concerning the activities of component auxiliaries and
3. To cultivate friendly relations and promote mutual understanding among physicians' families.

i

Today, more than ever, we must present a united front, to understand the many criticisms of medicine and do our best to educate the public about medicine through our own activities and examples.

a

And we want to help our husbands. The day has passed when the wife knew nothing of her husband's work and how he felt about public policies. We must concern ourselves with these situations and the best way to educate ourselves about them, so that we may be knowledgeable publicly, is through the auxiliary. If there is no organized auxiliary in your county, your wife may be a MAL—Member At Large—and receive *MD's Wife*, a national publication, which makes good reading on all sorts of subjects and *Blue Grass News*, our own state publication.

r

If your wife is a young physician's wife or a mature physician's wife, she will find both these publications up-to-date and interesting—and challenging. Help us by helping your wife. Tear out this page and take it home to her.

Tell HER YOU Love Her! And tell HER WE Love Her! Believe me, it will make a DIFFERENCE.

Sincerely,  
Pat Schafer, President  
WOMAN'S AUXILIARY TO KM

y

Dues: MALs (\$8.00 per year September to September)

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# DELEGATES' DELIBERATIONS



**S**OME have said "The closest thing to a doctor's heart is his money." I don't believe it is universally so. However, for those who may have some questions about the AMA financial situation at this time, some comments are offered.

I am now serving on the AMA House of Delegates reference committee which considers and reports to the House the Board of Trustees recommendations regarding the Budget. This standing committee met with the Board finance committee and appropriate staff prior to the Cincinnati clinical meeting, considered the Board's financial report to the House and recommended the report's approval by the House, which was done.

A \$36,000,000 budget for fiscal 1973 (December 1, 1972-November 30, 1973) was approved. Evidence presented to the reference committee indicated that the AMA's 900 em-

ployees are restrained in their expenditures and that mature responsibility was exercised in priority decisions regarding proposed spending. A budget was prepared using programmed and responsibility techniques. Association activities and expenses were pruned by the dismissal of 85 committee members, transferring the committee functions to other areas in the AMA. Income, half derived from member dues, is now inadequate to meet demands in the Association. Some more sources to augment revenue are needed now if activities are to be maintained at the current level. The KMA delegates and alternates request your opinions and comments to help guide us in formulating the necessary decisions that circumstances will force the AMA House to consider in the next few years.

DAVID B. STEVENS, M.D.  
KMA DELEGATE TO AMA

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## Project USA Seeks Support

An AMA program, "Project USA," has been developed in coordination with the National Health Service Corps to recruit volunteer physicians to fill in during any temporary absence of the approximately 150 physicians serving with the Corps. The NHSC provides for the assignment of health professionals to areas designated by the U.S. Public Health Service as critical health manpower shortage areas.

"Project USA" would like to hear from licensed physicians who want to help bring medical care to rural communities and inner-city areas on a short term basis. Write Bernard P. Harrison, Director, Project USA, American Medical Association, 535 N. Dearborn Street, Chicago, Illinois 60610.





# PUBLIC HEALTH PAGE



## State Health Department Sickle Cell Testing and Counseling Program

WILLIAM P. McELWAIN, M.D., M.P.H.

*Commissioner of Health  
Commonwealth of Kentucky*

**I**N July, 1971, the State Health Department contracted with the Thomas Hunt Morgan Institute of Genetics, Lexington, Kentucky, to implement a sickle cell detection and prevention program. Since that time extensive educational activities have been in progress. Approximately 10,000 black Kentuckians have been tested by electrophoresis and solubility methods. Prevalence of the heterozygous state for Hemoglobin S among those tested to date has been approximately seven per cent. All persons with abnormal findings have received counseling services through the program.

Increased awareness of the sickle cell problem in the black community resulted in the introduction of two bills during the last session of the Kentucky General Assembly, requiring mandatory sickle cell testing of blacks applying for marriage licenses as well as all black newborns. House Bill 615, An Act Relating to the Sick Cell Disease, was subsequently signed into law. The Act reads as follows:

Section 1. A new section of Chapter 402 of the Kentucky Revised Statutes is created to read as follows: **KRS 402.310**

This Act may be cited as the Kentucky Sick Cell Disease Detection Act of 1972.

Section 2. A new section of Chapter 402 of the Kentucky Revised Statutes is created to read as follows: **KRS 402.320**

In the event the applicants for a marriage license are of the Negro race, the examining physician shall obtain an appropriate blood specimen from each applicant and forward same to the Division of Laboratory Services, State Department of Health, or to a laboratory approved by the Department, to ascertain the existence or non-

existence of sickle cell trait or disease. In the event the laboratory tests indicate that both applicants are carriers of the trait or disease, the physician shall provide genetic counseling or refer the applicants to the Department or to an agency approved by the Department for such counseling.

Section 3. A new section of Chapter 402 of the Kentucky Revised Statutes is created to read as follows: **KRS 402.330**

Every physician and every other person legally permitted to engage in attendance at delivery of a pregnant woman shall take or cause to be taken an appropriate blood specimen from each newborn of the Negro race and forward same to the Division of Laboratory Services, State Department of Health, or to a laboratory approved by the Department, to ascertain the existence or nonexistence of sickle cell trait or disease. In the event the laboratory test indicates that the newborn has sickle cell disease the physician shall provide genetic counseling to the parents or refer them to the Department or to an agency approved by the Department for such counseling. The Department shall furnish consultative services to the attending physician upon his request.

Section 4. A new section of Chapter 402 of the Kentucky Revised Statutes is created to read as follows: **KRS 402.340**

The State Board of Health shall adopt rules and regulations for the proper administration and enforcement of this Act.

Section 5. A new section of Chapter 402 of the Kentucky Revised Statutes is created to read as follows: **KRS 402.990(16)**

Any person who violates any provision of this Act shall be fined not less than \$100 nor more than \$300.

Implementation of the pre-marital section of the law will involve the testing of approximately 5,000 pre-marital applicants per year and the counseling of approximately 25 couples, both of whom carry the sickle cell trait. Of the 5,000 black babies born per year and tested for sickle cell trait or disease, approximately 350-500 will be heterozygous for S hemoglobin and about 10 will be homozygous. Since technical difficulties preclude absolute distinction between trait and disease in a newborn, all abnormal sickle hemoglobin should be reported and parents should be informed and counseled. Parents should be advised of the desirability for a retest on the infant at six months of age.

Regulations for the administration and enforcement of the Sickle Cell Law were reviewed by the State Board of Health at their meeting on December 7, 1972, and are now being re-drafted. Since the Board plans to conduct public hearings prior to adoption, total implementation of the law will perhaps be delayed.

Meanwhile, the State Health Department will continue to encourage county health departments to initiate voluntary testing and counseling programs, and will provide the counties with the resources and technical assistance required to provide these services. The Division of Laboratory Services of the State Health Department will test at no cost all appropriate blood specimens submitted for sickle cell testing by Kentucky physicians, hospitals, and health departments.

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**Stephen G. Edelstein, M.D. and Ballard D. Wright, M.D.**, both of Lexington, were named as Fellows of the American College of Chest Physicians at the College's recent annual Scientific Assembly in Denver. This recognition marks a physician's fulfillment of the highest professional standards in the cardiopulmonary field.

**Ward O. Griffen, Jr., M.D.**, Lexington, was among the 33 new members of the Board of Governors of the American College of Surgeons elected at the recent annual Clinical Congress of the College held in San Francisco. Kentucky has two other Governors who were elected last year. They are **Richard F. Grise, M.D.**, Bowling Green and **Hiram C. Polk, Jr., M.D.**, Louisville.

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# THE INSURANCE PAGE



## Workmen's Compensation Insurance 1973

**T**HE 1972 Legislature of Kentucky enacted a bill which makes extensive changes in the Workmen's Compensation Law. These changes became effective January 1, 1973. Your insurance editor finds that he lacks the legal knowledge and vocabulary required to understand this new law, but several impressions have been gained from reading it.

It is apparent that doctors who do pre-employment insurance examinations will be required to do much more extensive examinations and it will be much more important to record positive statements of examinations instead of using a check list. It will be very important to take a thorough history of pre-existing diseases and occupational injuries. The employer may want to know about pre-existing conditions from the standpoint of future disability, or he may wish to decline employment of anyone who has a pre-existing condition or history of previous occupational injury.

According to the new law, most any type injury or disease will be covered. For instance, permanent partial loss of hearing will now be covered. It is questionable that the simple whispered voice or spoken voice tests for hearing will be adequate documentation of pre-employment hearing status. Laborers employed in heavy construction work, may at any time be exposed to loud and continuous noises, and may claim compensation due to loss of hearing from exposure to this noise. It will be very important to have an accurate record of pre-employment hearing levels.

Under the new law, almost everyone who is regularly employed and some part-time employees will be covered under workmen's compensation regardless of the number of people employed by the employer. Because of the

great increase in the number of persons covered, doctors can expect a great increase in the number of patients being treated for minor injuries, and a great increase in the number of claims for total and permanent disability, since the new law provides for lifetime payment for total and permanent disability.

During the years covered by the writer's medical experience, he has gained the impression that most doctors believe that compensation insurance companies encourage medical attention for injuries and that any and all medical service administered to the injured persons will be covered by compensation insurance. The insurance editor recommends caution along these lines. It is one thing for the compensation law to require the employer to be responsible and it is another thing for the compensation insurance policy to cover all responsibility. The author is aware of one case which came up for peer review in the past year where the compensation insurance company objected to the number of office treatments which a patient received. It was their contention that the over-utilization was on the part of the patient and the insurance company claimed that they were not responsible for treatment simply because the patient demanded it.

As the State and Federal Government become more and more involved, it becomes increasingly important for the physician who treats an illness which may be related to the employment to document the extent of the illness or injury and to keep hospitalization and office visits to a minimum consistent with good medical practice. We can expect compensation insurance companies to appeal to the peer review mechanism with increasing frequency.

LEWIS DICKINSON, M.D.





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- ☐ Pyopen (disodium carbenicillin) vials for injection equivalent to 1 gm. and 5 gm. of carbenicillin.
- ☐ Bactocill (sodium oxacillin) capsules equivalent to 250 mg. and 500 mg. oxacillin and vials for injection equivalent to 500 mg. and 1 gm. oxacillin.



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*From the files of the*  
**COMMITTEE FOR THE**  
**STUDY OF MATERNAL MORTALITY**

---

**T**HE patient is a 36-year-old divorced, gravida 5, para 4, abortus 1, who had an expected date of confinement of August 12, 1970. Patient was first seen February 13, 1970. Physical examination at that time was within normal limits. The uterus was compatible with a 14-week gestational size. Past obstetrical history revealed the pregnancy terminated in November, 1963, with the delivery of an eight pound female that was Coombs positive and felt to be Rh sensitized. An Rh titer obtained on the patient on April 3, 1970, revealed a saline titer of 1-1024 and an albumin titer of 1-1024. Because of the high Rh titer, an amniocentesis was performed. The first amniocentesis done in April showed an optical density in the mid second zone. A repeat amniocentesis done on May 26, 1970, revealed a creatinine of 0.5 mg%, a total protein of 0.5 gm%, and an optical density of 0.211 which again was middle second zone. Amniocentesis were done at intervals of 2-3 weeks and there was a progressive fall in the optical density. The last amniocentesis that was done at approximately 36 weeks revealed no change. This was the reading on three subsequent occasions. It was felt, therefore, that the baby was not sensitized and that it could possibly be Rh negative. The patient was followed without other complications, until the morning of August 28, 1970. At this time the patient appeared in the Emergency Room with a history of spontaneous premature rupture of the membranes. She was admitted to the hospital. At the time of admission the cervix was 3 cm dilated and the presenting part was cephalic, station minus 2. History revealed mild respiratory difficulty. On occasions she had had bronchitis. The patient did smoke about one pack of cigarettes a day. There had been no previous surgery and no previous hospitalization for serious illness. She had a history of chronic pyelonephritis which had been treated on an outpatient basis.

Physical examination on admission revealed a well developed white female in no acute distress. The blood pressure on admission was 120/70, the pulse was 80. The patient was very cooperative. The head was essentially normal, the neck was supple, the thyroid gland was not enlarged. The chest was clear with an occasional expiratory wheeze on forced expiration. There was scattered rhonchi throughout the lung bases but these cleared with coughing. The heart revealed a regular sinus rhythm with no murmurs. The abdomen was soft and not tender. The liver, kidney and spleen were not palpable. The uterus was felt to be term size with fetal heart tone in the right upper quadrant of 140 beats per minute. The uterus was non-tender, but irritable, relaxing between mild

contractions. Pelvic examination revealed the cervix to be 3 cm dilated, minus 2 station, cephalic presentation, with ruptured membranes and leaking grossly meconium stained amniotic fluid. The patient was in the labor and delivery room, and on consultation with the staff doctor that morning, it was decided that because of the possibility of Rh sensitization and the appearance of meconium stained fluid that the baby might have fetal distress and delivery should be attempted by pitocin induction. The cervix at this time was partially effaced, however, the internal os was closed. The station was minus 2. The fetal heart tones were regular prior to induction in the left lower quadrant. It was felt that a trial of pitocin induction should be started, and if the uterus did not respond a Cesarean section would be performed. At approximately 8:45 a.m. on August 28, the infusion of pitocin induction began with 10 units of pitocin in 1000 cc of DSW. Over a 15-minute period there were some irregular uterine contractions which lasted less than a minute and occurred at intervals of 3-5 minutes. At approximately 10 a.m. the patient began to have some expiratory wheezing and some disorientation. She had received 15 mg of Phenergan intravenously prior to the infusion. Over a period of a few minutes the patient rapidly became cyanotic in acute respiratory distress. She had a massive bowel movement with expulsion of mucus. At this time the pitocin infusion was stopped and the patient was moved from the labor room to the delivery room. She was markedly cyanotic. The blood pressure was unobtainable and she was in a moribund condition. She was immediately given 1000 mg of Solu-Cortef by way of the intravenous fluid which was going in an arm vein. An attempt was made to put an endotracheal tube into the larynx. This was accomplished and the patient was given 100% oxygen. At this time, fetal heart tones were not heard and it was felt that Cesarean section was not indicated. Over the period of the next 30 minutes the patient received Atropine 1 mg intravenously, Digoxin 5 mg intravenously, sodium bicarbonate 1500 cc intravenously, and as an effort to correct the cardiac arrhythmia she was given 100 mg of xylocaine intravenously. The presumptive diagnosis at this time was amniotic fluid embolus. A cardiology consultation was obtained. There was a marked ventricular tachycardia and Isuprel was withheld. However, when the tachycardia subsided the patient did get intravenous Isuprel on the recommendation of the cardiologist. A surgical consultation had been obtained because of the persistent cyanosis of the shoulders and the head. A tracheostomy

*(Continued on Page 18)*

# when manhood ebbs...

due to testicular deficiency

## Halotestin® 5 mg tablets

fluoxymesterone, Upjohn  
oral hormone replacement with parenteral-like potency

**Halotestin® Tablets—2, 5 and 10 mg**  
(fluoxymesterone Tablets, U.S.P., Upjohn)

**Indications in the male:** Primary indication in the male is replacement therapy. Prevents the development of atrophic changes in the accessory male sex organs following castration:

**1.** Primary eunuchoidism and eunuchism. **2.** Male climacteric symptoms when these are secondary to androgen deficiency. **3.** Those symptoms of panhypopituitarism related to hypogonadism. **4.** Impotence due to androgen deficiency. **5.** Delayed puberty, provided it has been definitely established as such, and it is not just a familial trait.

**In the female:** **1.** Prevention of postpartum breast manifestations of pain and engorgement. **2.** Palliation of androgen-responsive, advanced, inoperable female breast cancer in women who are more than 1, but less than 5 years post-menopausal or

who have been proven to have a hormone-dependent tumor, as shown by previous beneficial response to castration.

**Contraindications:** Carcinoma of the male breast. Carcinoma, known or suspected, of the prostate. Cardiac, hepatic or renal decompensation. Hypercalcemia. Liver function impairment. Prepubertal males. Pregnancy.

**Warnings:** Hypercalcemia may occur in immobilized patients, and in patients with breast cancer. In patients with cancer this may indicate progression of bony metastasis. If this occurs the drug should be discontinued. Watch female patients closely for signs of virilization. Some effects may not be reversible. Discontinue if cholestatic hepatitis with jaundice appears or liver tests become abnormal.

**Precautions:** Patients with cardiac, renal or hepatic derangement may retain sodium and water

thus forming edema. Priapism or excessive sexual stimulation, oligospermia, reduced ejaculatory volume, hypersensitivity and gynecomastia may occur. When any of these effects appear the androgen should be stopped.

**Adverse Reactions:** Acne. Decreased ejaculatory volume. Gynecomastia. Edema. Hypersensitivity, including skin manifestations and anaphylactoid reactions. Priapism. Hypercalcemia (especially in immobile patients and those with metastatic breast carcinoma). Virilization in females. Cholestatic jaundice.

#### How Supplied

**2 mg**—bottles of 100 scored tablets.

**5 mg**—bottles of 50 scored tablets.

**10 mg**—bottles of 50 scored tablets.

For additional product information, see your Upjohn representative or consult the package circular.

MED B-6-S (MAN)

## Maternal Mortality Page

(Continued from Page 16)

my was performed. Once cardiac standstill occurred the electric shock therapy was used and a ventricular response was obtained. However, there was marked ventricular tachycardia. The resuscitative measures continued for approximately one hour at which time spontaneous heart rate and respirations could not be obtained and the patient was pronounced dead. The autopsy revealed massive amniotic fluid embolism with fetal squamous evident in the pulmonary arteries.

### Comment

This was classified as a direct obstetrical death with no preventable factors. The Committee agreed that this did not represent a Rh iso-immunization problem. The large increase in titer indicated an amnestic response. The autopsy confirmed the clinical impression of amniotic fluid embolism. The classic paper describing this entity appears in the *American Journal of Obstetrics and Gynecology*, Volume 66, page 465, 1953. This series of papers from the Boston group beautifully describes the entity and its pathophysiology.

### PHYSICIANS NEEDED

Family Practitioner and General Surgeon needed for rural area of Morganfield-Sturgis, Kentucky. Modern J.C.A.H. approved hospital in community. To arrange for a visit and assistance in getting practice started contact: *E. J. Ryan, Jr., Director, Medical Relations, Hospital Corporation of America, P.O. Box 550, Nashville, Tennessee 37203.*

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# Encounter under the Scanning Electron Microscope

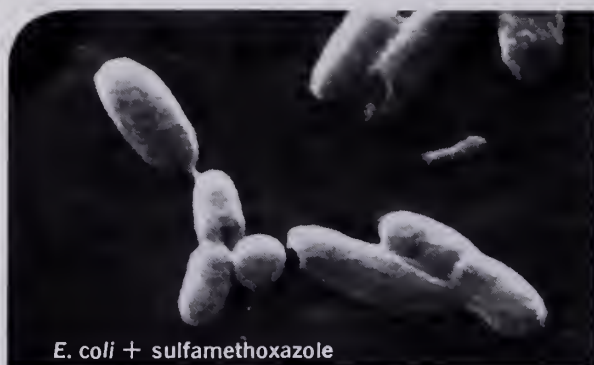


## SEM reveals changes in *E. coli* exposed to antibacterial agents

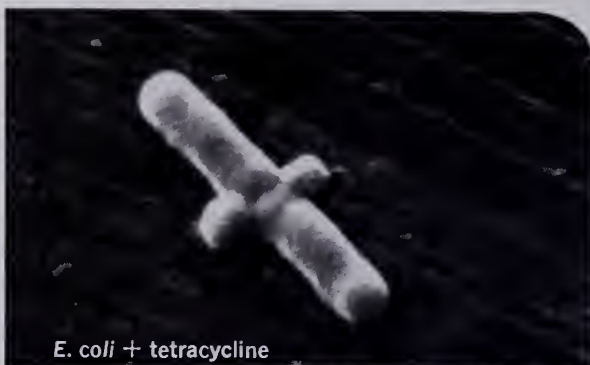
The Scanning Electron Microscope (SEM) is the only instrument which gives 3-dimensional views on a microscopic level. This permits the surface morphology of microorganisms to be observed in

detailed perspective. Changes in surface morphology of *E. coli* exposed to various antimicrobial agents are seen on the following page. An SEM photomicrograph of normal control *E. coli* appears above.





*E. coli* + sulfamethoxazole



*E. coli* + tetracycline



*E. coli* + cephalothin



*E. coli* + ampicillin

## Different modes of antibacterial action — Similar changes in morphology

As part of a series of experiments,<sup>1-3</sup> strains of *E. coli* proven susceptible to each antibacterial agent were exposed to 1 MIC of the respective antibacterials for a three-hour period. Included were cell-wall-active drugs, ampicillin and cephalothin; a drug interfering with intracellular protein synthesis, tetracycline; and a chemical agent which acts by interference with para-aminobenzoic acid, sulfamethoxazole.

As seen above, elongation of the bacilli, mid-cell defects and spheroplast-like forms may be appreciated with the SEM technique. These changes in bacterial morphology were similar... regardless of the antibacterial agent used and irrespective of

its mechanism of action.

"At present, the significance of these observations in clinical infection must be considered with caution, but it is hoped that these data will stimulate a reevaluation of present concepts of the nature and role of morphological variants of bacteria exposed to a variety of antibacterial factors."<sup>2</sup>

It should be noted that no clinical conclusions can be drawn from this study, as it is not always possible to extrapolate *in vitro* data to humans.

**References:** 1. Klainer, A. S.; Fass, R. J., and Perkins, R. L.: Scientific Exhibit presented at the 25th American Medical Association Clinical Convention, New Orleans, La., Nov. 28-Dec. 1, 1971. 2. Klainer, A. S., and Perkins, R. L.: *Antimicrob. Agents Chemother.*, 1:164, 1972. 3. Klainer, A. S.: Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media.** The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

**Contraindications:** Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

**Warnings:** Safety during pregnancy has not been estab-

lished. Sulfonamides should not be used for group A hemolytic streptococcal infections and will not eradicate prevent sequelae (rheumatic fever, glomerulonephritis) of infections. Deaths from hypersensitivity reactions, agranulosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children six with chronic renal disease.

**Precautions:** Use cautiously in patients with impaired or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

**Adverse Reactions:** Blood dyscrasias (agranulocytosis,

# Encounter in Clinical Practice

## Control of primary bacterial offenders

Antibacterial Gantanol® (sulfamethoxazole) controls susceptible strains of *E. coli* and other gram-negative and gram-positive organisms

often implicated in acute nonobstructed pyelonephritis and cystitis.

## Prompt antibacterial blood and urine levels

In from 2 to 3 hours after the initial 2-Gm adult dose, antibacterial levels are present in

both the blood and urine.

## B.I.D./T.I.D. dosage for around-the-clock coverage

Subsequent 1-Gm doses provide up to 12 hours of antibacterial coverage. More severe u.t.i. may require a q. 8 h. dosage regimen. Either schedule provides coverage during the waking

and sleeping hours—especially important during hours of sleep when normal urinary retention tends to favor bacterial proliferation.

## Also effective in nonobstructed chronic and recurrent u.t.i.

It is not uncommon for the elderly and the debilitated to develop chronic and/or recurrent nonobstructed urinary tract infections such as pyelonephritis and cystitis. Such cases often re-

spond satisfactorily to Gantanol. The increasing frequency of resistant organisms is a limitation of usefulness of antibacterial agents including sulfonamides, especially in chronic or recurrent u.t.i.

## Your Option: Tablets or Suspension

Either dosage form—the Tablets or the pleasant-tasting, cherry-flavored Suspension—can provide the dependable antibacterial activity necessary to control susceptible nonobstructed cystitis and pyelonephritis. Symptomatic improvement may usually be expected in 24 to 48 hours. The usual precautions with sulfonamide

therapy should be observed, including adequate fluid intake. Gantanol (sulfamethoxazole) is generally well tolerated with relative freedom from complications; the most common side effects are nausea, vomiting and diarrhea. Frequent c.b.c.'s and urinalyses with microscopic examination are recommended.

**In nonobstructed cystitis and pyelonephritis due to susceptible organisms**

**Gantanol®  
(sulfamethoxazole)  
Basic Therapy**

c anemia, thrombocytopenia, leukopenia, hemolytic anemia, hypoprothrombinemia and methemoglobinemia); *reactions* (erythema multiforme, skin eruptions, epidermolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctivitis, scleral injection, photosensitization, arthralgia and myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and colitis); *CNS reactions* (headache, peripheral neuritis, meningeal irritation, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia); *miscellaneous reactions* (drug fever, chills, fever, eosinophilia, oliguria and anuria, periarteritis nodosa and other phenomena). Due to certain chemical similarities with diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of hypoglycemia as well as thy-

roid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

**Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age** (except adjunctively with pyrimethamine in congenital toxoplasmosis).

**Usual adult dosage:** 2 Gm (4 tabs or teasp.) initially, then 1 Gm b.i.d. or t.i.d. depending on severity of infection.

**Usual child's dosage:** 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs b.i.d. Maximum dose should not exceed 75 mg/kg/24 hrs.

**Supplied:** Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.



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Division of Hoffmann-La Roche Inc.  
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# Continuing Educational Opportunities

From The

## KMA Postgraduate Medical Education Office

### SEND IN MEETING INFORMATION

Many medical organizations are setting dates for their spring and summer meetings. At the same time they are choosing the topics to be discussed, arranging for speakers and planning programs.

The Continuing Medical Education office of the Kentucky Medical Association would like to urge these societies and organizations to notify this office of these dates and topics so they can be added to the "Continuing Education Opportunities" calendar in *The Journal*. In this way conflicts in dates can be avoided and a wider audience can be informed of these upcoming meetings.

Please send such information, when available, to the KMA Continuing Medical Education Office, 3532 Ephraim McDowell Drive, Louisville, Ky. 40205.

### IN KENTUCKY

#### JANUARY

- 17 Jewish Hospital Medical Lecture Series, "Antibiotic Therapy in Infectious Diseases," Ward Bullock, M.D., University of Kentucky, Jewish Hospital, Louisville
- 17-18 Kentucky Academy of Family Physicians Annual Northern Kentucky Seminar, "Infectious Disease Conference," Rowntowner Motor Inn, Ft. Mitchell
- 20 Symposium on Anesthesia and Digitalis, University of Louisville Health Sciences Center Auditorium, Louisville

#### FEBRUARY

- 11-17 Third Family Medicine Review, Frank R. Lemon, M.D., Program Chairman, University of Kentucky Medical Center, Registration Fee: \$175. AAFP credit has been requested for 42 hours. Contact Doctor Lemon for further information.
- 21 Jewish Hospital Medical Lecture Series, "Multiphasic Testing," Robert S. Howell, M.D., University of Louisville, Jewish Hospital, Louisville

#### MARCH

- 2-3 Spring meeting, Kentucky Academy, College of Surgeons, Galt House, Louisville
- 21 Jewish Hospital Medical Lecture Series, "Cushing Syndrome," David Orth, M.D., Vanderbilt, Jewish Hospital, Louisville

29-30 KMA INTERIM MEETING, Lake Barkley Lodge, Cadiz

### IN SURROUNDING STATES

#### JANUARY

- 17-18 Postgraduate course, "Managing the Complicated Surgical Patient," Cleveland Clinic, Cleveland
- 31-February 1 Postgraduate course, "Medical Progress for the Family Physician," Cleveland Clinic, Cleveland

#### FEBRUARY

- 10-11 AMA Annual Congress on Medical Education, Chicago
- 21-22 Postgraduate course, "Pharmacology and Clinical Effectiveness of Anti-Inflammatory Drugs," Cleveland Clinic, Cleveland
- 28-March 1 Postgraduate course, "Sports Medicine," Cleveland Clinic, Cleveland



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#3, codeine phosphate\* (32.4 mg.) gr. 1/2  
#4, codeine phosphate\* (64.8 mg.) gr. 1





**IMPORTANT INFORMATION:** This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.

**Indications:** Lomotil is effective as adjunctive therapy in the management of diarrhea.

**Contraindications:** In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

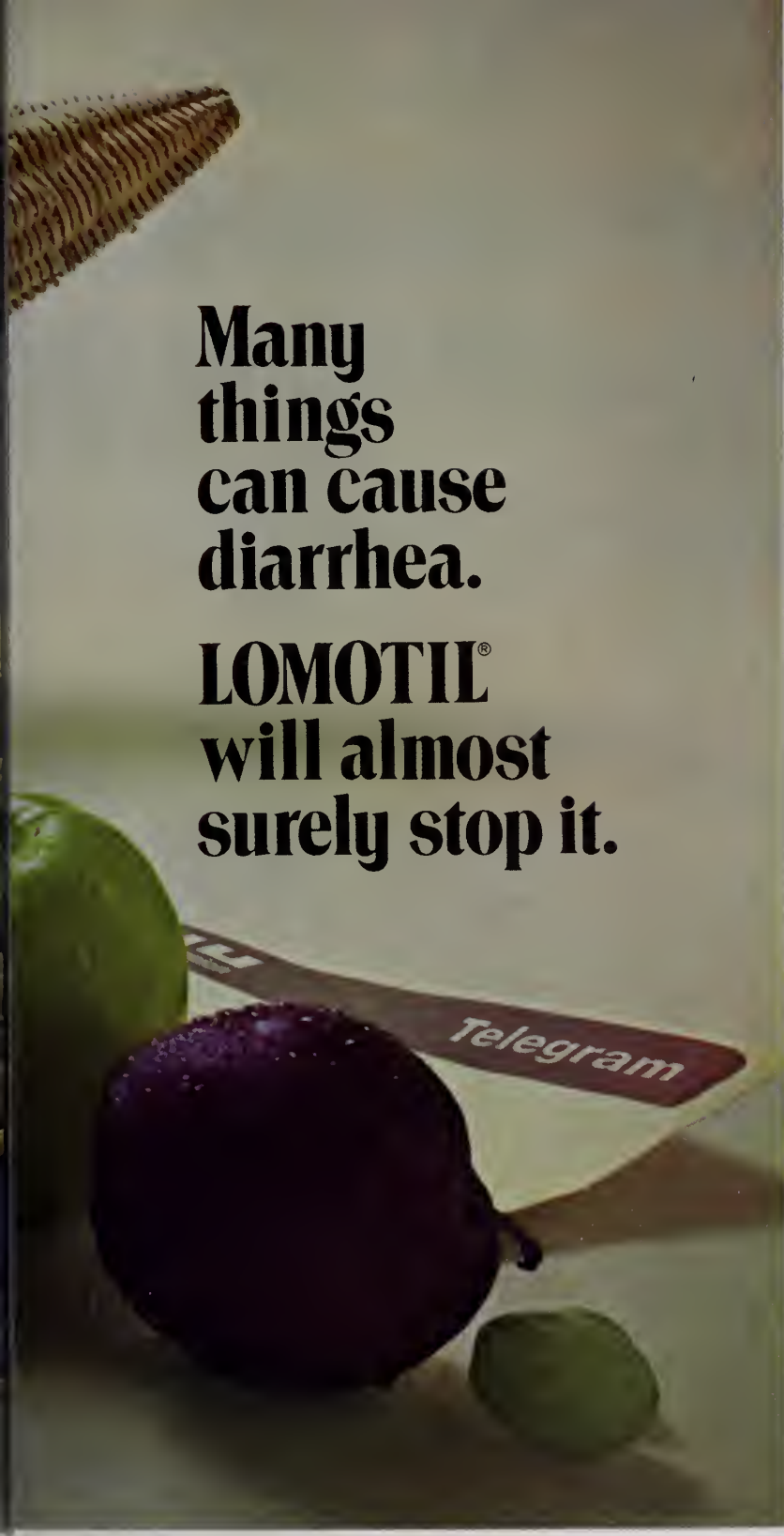
**Warnings:** Use with caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis.

**Usage in pregnancy:** Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the

breast milk of nursing mothers.

**Precautions:** Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosages, but not exceed recommended dosages. Administer with caution to patients receiving addicting drugs known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage. Strictly observe contraindications, warnings and cautions for atropine; use with caution in children since signs of atropinism may occur even with recommended dosage.

**Adverse reactions:** Atropine effects include dryness of skin and mucous membranes, flushing and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, ileus.



**Many  
things  
can cause  
diarrhea.**

**LOMOTIL®  
will almost  
surely stop it.**

The causes of diarrhea are as varied as man's complaints and indiscretions. Because the causes of diarrhea can be obscure and because uncontrolled diarrhea can present serious problems, it is important to know a drug that will usually stop diarrhea promptly. For many physicians, the antidiarrheal drug of choice is Lomotil. It provides almost certain control of diarrhea.

It is also useful in controlling the intestinal transit time of patients with ileostomies and colostomies and the diarrhea occurring after gastric surgery.

Serious side effects are infrequent with Lomotil. It should be used with caution in young children, however, because of their variability in response. Use of Lomotil in children under two years of age is contraindicated.

**For the almost certain  
control of diarrhea,**

## **LOMOTIL®**

**TABLETS/LIQUID**

Each tablet and each 5 ml. of liquid contain:  
Diphenoxylate hydrochloride ..... 2.5 mg.  
(Warning: may be habit forming)  
Atropine sulfate ..... 0.025 mg.

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restlessness, euphoria, pruritus, angioneu-  
ma, giant urticaria and paralytic ileus.

**Contraindications and administration:** *Lomotil is contraindicated in children less than 2 years old.* Use only liquid for children 2 to 12 years old. For children 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 5 ml. (2.5 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (10 mg.) q.i.d. or two regular teaspoonfuls (10 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make dosage adjustment as soon as initial symptoms are controlled.

**Warnings:** Keep the medication out of the reach of children since accidental overdosage may cause even fatal, respiratory depression. Signs of overdosage include flushing, lethargy or coma, hyporeflexes, nystagmus, pinpoint pupils, tachycardia and respiratory depression which may occur

12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. Use a narcotic antagonist in severe respiratory depression. Observation should extend over at least 48 hours.

**Dosage forms:** *Tablets*, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. *Liquid*, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of ½ ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

**Dosage forms:** *Tablets*, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. *Liquid*, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of ½ ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.





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### Clinical Data:

**Patient:** 47-year-old male.

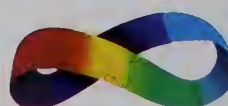
**Diagnosis:** Severe pyoderma, left hand.

**Culture:** *Staphylococcus aureus*, coagulase positive and sensitive to MINOCIN.

**Temperature:** 102° F

**Therapy:** MINOCIN Minocycline HCl Capsules, 100 mg: 200 mg *stat*, 100 mg every 12 hours. Medication began 9/7/71. By fourth day, temperature was normal and pustular lesions considerably improved. Last dose taken 9/14/71.

**Concomitant therapy:** None.†



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**MINOCYCLINE HCl**

Capsules, 100 mg: 2 *stat*, 1 q 12 h.

Minocycline is a tetracycline with activity against a wide range of gram-negative and gram-positive organisms.

**Contraindications:** Hypersensitivity to any tetracycline.

**Warnings:** The use of tetracyclines during tooth development (last half of pregnancy, infancy and childhood to the age of 8 years) may cause permanent discoloration of the teeth (yellow-gray-brown). This is more common during long-term use but has been observed following repeated short-term courses. Enamel hypoplasia has also been reported. Tetracyclines, therefore, should not be used in this age group unless other drugs are not likely to be effective or are contraindicated. In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, use lower doses, and, in prolonged therapy, determine serum levels. Photosensitivity manifested by an exaggerated sunburn reaction has been observed in some individuals taking tetracyclines. Advise patients apt to be exposed to direct sunlight or ultraviolet light that such reaction can occur, and discontinue treatment at first evidence of skin erythema. Studies to date indicate that photosensitivity does not occur with MINOCIN Minocycline HCl. In patients with significantly impaired renal function, the antianabolic action of tetracycline may cause an increase in BUN, leading to azotemia, hyperphosphatemia, and acidosis. Pregnancy: In animal studies, tetracyclines cross the placenta, are found in fetal tissues, and can have toxic effects on the developing fetus (often related to retardation of skeletal development). Embryotoxicity has been noted in animals treated early in pregnancy. Safety of use during human pregnancy has not been established. **Newborns, infants and children:** All tetracyclines form a stable calcium complex in any bone-forming tissue. Prematures, given oral doses of 25 mg./kg. every 6 hours, demonstrated a decrease in fibula growth rate, reversible when drug was discontinued. Tetracyclines are present in the milk of lactating women who are taking a drug of this class. Safe

use has not been established in children under 13.

**Precautions:** Use may result in overgrowth of nonsusceptible organisms, including fungi. If superinfection occurs, institute appropriate therapy. In venereal diseases when coexistent syphilis is suspected, darkfield examination should be done before treatment is started and blood serology repeated monthly for at least four months. Patients on anticoagulant therapy may require downward adjustment of such dosage. Test for organ system dysfunction (e.g., renal, hepatic and hemopoietic) in long-term use. Treat all Group A beta hemolytic streptococcal infections for at least 10 days. Avoid giving tetracycline in conjunction with penicillin.

**Adverse Reactions:** (Common to all tetracyclines, including MINOCIN) GI: (with both oral and parenteral use): anorexia, nausea, light-headedness, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in anogenital region. **Skin:** maculopapular and erythematous rashes. Exfoliative dermatitis (uncommon). Photosensitivity is discussed above ("Warnings"). **Renal toxicity:** rise in BUN, dose-related (see "Warnings"). **Hypersensitivity reactions:** urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus. When given in high doses, tetracyclines may produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur. In young infants, bulging fontanels have been reported following full therapeutic dosage, disappearing rapidly when drug was discontinued. **Blood:** hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

**NOTE:** Concomitant therapy: Antacids containing aluminum, calcium, or magnesium impair absorption; do not give to patients taking oral minocycline. Studies to date indicate that MINOCIN is not notably influenced by foods and dairy products.

\*Indicated in infections due to susceptible organisms. Culture and sensitivity testing recommended. Tetracyclines are not the drugs of choice in the treatment of any staphylococcal infection.

†Case Report, Clinical Investigation Department, Lederle Laboratories.



*"The history of science, and in particular the history of medicine . . . is . . . the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."*

*— George Sarton, from "The History of Medicine Versus the History of Art"*

**Are combination drug products useful in treatment involving concomitant use of two or more drugs?**

**Opinion**

**Results of a questionnaire to 7,000 physicians:**

**62.9%**

**Believe combination drug products are useful.**

**13.8%**

**Do not believe combination drug products are useful.**

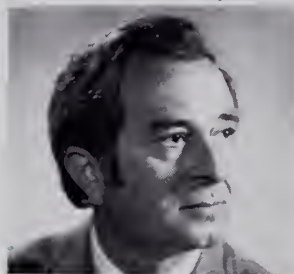


# Are combination drug products useful in treatment involving concomitant use of two or more drugs

## Opinion & Dialogue

### Doctor of Medicine

Louis Lasagna, M.D.  
Professor and Chairman  
Department of  
Pharmacology & Toxicology  
University of Rochester  
School of Medicine  
and Dentistry



Obviously, many drugs are given concomitantly. Whether it makes sense to combine medications in one preparation, be it capsule, tablet, or liquid, is a question that can be answered only by examining the advantages and disadvantages in the individual case.

Among the advantages is, first of all, convenience. The more medications that are taken concurrently and the more complicated the directions, the less likely the patient is to take medications accurately. From the standpoint of convenience and accuracy, and economy as well, you can make an important case for putting medications together in one preparation, as long as they are compatible.

By the same token, when you prescribe a properly tested and rational combination, you should have less worry about pharmaceutical or pharmacological compatibility — and about reasonable dosage ratios as well. Compatibility of the formulation should be demonstrated in the laboratory and clinic before the product is available for prescription — which is more than can usually be said for

the physician's own spontaneous creations. And, the dosage ratios employed in rational precompounded combinations are designed to meet the needs of substantial numbers of "typical" patients.

There is no doubt that many "atypical" patients are to be found, and for them the prefabricated combination must be rejected. But that hardly argues for eliminating rational combinations from the market. Think, for example, of the problems that would arise if the components of widely accepted combinations, like the oral contraceptives and the diuretic-antihypertensives, always had to be prescribed, purchased and ingested separately.

One disadvantage that comes to mind is some doctors' unawareness of the ingredients a given combination contains. For example, a doctor might know that a patient is allergic to aspirin but forget that a certain analgesic mixture, which he knows only by its trade name, contains aspirin. His prescription, then, causes considerable discomfort, to say the least. This problem is a function of physician education, rather than of combination therapy as such. Improving doctors' knowledge about all medications they prescribe is a problem that deserves tackling on its own.

Another accusation leveled at combination drugs is that they encourage sloppiness of diagnosis and treatment. In many cases, however, a combination may prove to be the most effective choice. A good ex-

ample of the usefulness of combinations appears in a recent article in the *Journal of Chronic Diseases* on the efficacy and side effects of an antihypertensive containing three ingredients, in which the track records of the combination drug and the individual ingredients were compared. Interestingly enough, whether the drugs were given individually or together, incidence and severity of side effects were the same. But blood pressure control was invariably better when the drugs were taken in one combination tablet than when they were taken separately (in "titratable" dosage) or in two or three different tablets.

Deciding which combinations constitute rational therapy obviously leads to a discussion of who is to determine which should be used and which should not. Realistically, I think combinations should be evaluated somewhat differently if they are old and established or new and untried.

In today's regulatory atmosphere, there is no possibility of a new combination being put on the market without a substantial amount of acceptable evidence in the form of controlled trials that show it to be safe and efficacious. On the other hand, I believe a different set of standards should apply to combination preparations that have been around for a long time. In other words, physician acceptance over a long period should be given some weight as evidence of the efficacy and safety of these drugs.

The FDA, however, does not seem to share this attitude. It often requires, for these older products, controlled trials that will monopolize the time of already overtired investiga-

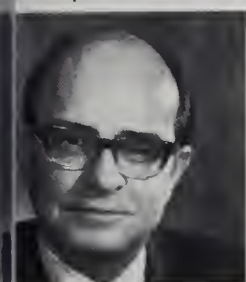
tors and cost a great deal of money. I wish we could agree on a "grandfather clause" approach to preparations that have been in for a number of years and that have an apparently satisfactory track record.

For example, I think some of the antibiotic combinations that were taken off the market by the FDA performed quite well. I'm thinking particularly penicillin-streptomycin combinations that patients — especially surgical patients — were given in injection. This made less discomfort for the patient, less demand on nurses' time, and few opportunities for dosing errors. To take such preparation off the market doesn't seem to be good medicine, unless actual age showed a great deal of harm from the injection (rather than the proven use) of the combination.

The point that should be emphasized is that there are both rational and irrational combinations. The real question is, who should determine which is which? Obviously, the FDA must play a major role in making this determination. In fact, I don't think it avoids taking the ultimate responsibility, but it should enlist the help of outside physicians and experts in assessing the evidence in making the ultimate decision.

# Maker of Medicine

Clarke Wescoe, M.D.  
President  
Winthrop Laboratories



two medications are effectively to treat a condition, and it is on that they are compatible, it clearly is useful convenient to provide in one dosage form. It would make no sense, in fact it would be pedantic, to insist they always be prescribed separately. To of the appearance of dandy, the "expert" de- the combination be- it is a fixed dosage When the "expert" es the concept of fixed se form he obscures fact that single-ingre- pharmaceutical prepa- rations are also fixed e forms. By a singular te exercise he im- a pejorative meaning e term "fixed dose" when he uses it with ect to combinations. is ignored is the sim- act that only in the t of circumstances any physician attempt rate an exact thera- e response in his pa- It is quite possible some aches and pains espond to 500 mg. of n yet that fact does ilitate against the us- ose being 650 mg. e other semantic plo called into play is to be a combination ct as rational or irra- . The antibiotic mixtures, ource of much of the tism generated against

combinations generally. Obviously, no one should be exposed willy-nilly to the potential side effects of two or three antibiotics when only one is needed. At the same time there are cases where it is prudent to prescribe more than one. The clinician is the judge in these circumstances, as he should be.

There is no clear definition of the word rational. Most persons, I suppose, would find it synonymous with reasonable, but in many circumstances it may best be defined as the opinion of those in power at the moment.

Other factors govern combination therapy, not the least of which has been its broad use by practicing physicians anxious to achieve convenience in prescribing, to reduce medication error, and to save money for their patients. Combinations clearly have met the test on all three counts.

I have been impressed by studies showing that the rate of error climbs markedly with the number of medications to be taken, even with sophisticated patients. When medically justified, therefore, this factor alone supports the logic of combination therapy.

The cost argument for combinations appears to be irrefutable. In 1971, R. A. Gosselin studied the 71 combination products (excluding oral contraceptives) among the 200 most prescribed drugs. The study found that if all 71 products were discontinued, and if each ingredient in these combinations were prescribed separately, the price of medicines to patients would jump by \$443.2 million on a national basis! At a time when the cost of medical care is under so much fire, it would be nonsensical to boost costs without clearly irre-

futable medical reasons.

The part played by government on this question, of course, is fundamental. The FDA should play a role in determining which combinations are reasonable. That role, as defined by law and regulation, is to ensure that any medication on the market is safe and effective in line with its label claims. Certainly combinations are entitled to as much consideration as single entities—neither more nor less. So long as the addition of one drug to another does not make either less safe, or less effective, so long as they are compatible in a formulation, we have a reasonable product. It makes no sense to recommend the use of two products for certain conditions and to deny their being combined in a single form. An unhappy side effect of the problem concerns the efficacy panel discussions of many products submitted for review. The term "effective, but" has been freely interpreted to mean "ineffective" in toto, regardless of the merit of the individual drugs. This interpretation has placed numerous useful combination products in needless jeopardy.

In reading the actual reports of the review panels, it seems clear that some of the ratings were based less on scientific research and clinical observation than on the "informed" opinions of the panelists. These "informed" opinions were accepted at face value, while

the "informed" opinions of others who had used the products were rejected. All of this put combination products into a sort of scientific never-never land.

It should be kept in mind by all, government as well as others involved in our health care system, that advances in therapy are seldom made in leaps and bounds but rather by small painstaking steps—and that some of these steps have resulted from research in combination drugs as well as with single entities. Given the near-infinite biologic variation in patient response, this is hardly surprising to clinicians. It should not be to regulatory agencies either.

In the end, the practicing physician is in the best position to decide if a particular combination makes sense. Such a decision should not be made exclusively by those whose responsibility for continuing clinical care is limited. Clinicians are the best judges of efficacy because the ultimate proof of any product's effectiveness is acceptance by physicians who have observed its actions in patients over time. The corollary statement may be made about over-the-counter medicines, which would not long survive if they failed to afford the relief the user anticipates. That the antihistamine in a "cold" remedy may not *always* be necessary is no reason to prescribe the combination generally.

## Opinion & Dialogue

What is your opinion, doctor?

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# *The* JOURNAL *of the* Kentucky Medical Association

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## Underground Coal Mine Injuries

JAMES B. ZIMMERMAN, M.D.\*

*Pikeville, Kentucky*

*This is a discussion of underground coal mine accidents and the injuries seen in the outpatient, hospitalized and fatal victims.*

UNDERGROUND coal mining is a hazardous occupation. Occupational lung disease in coal miners has been under close study for the past several years. Coal workers pneumoconiosis has been reported to occur in 9.8% of working coal miners and 18.2% of the non-working miners (retired, disabled and temporarily out of work).<sup>1</sup> The passage of Public Law 91-173, the *Federal Coal Mine Health and Safety Act of 1969* with benefits for the disabled coal miner with pneumoconiosis has focused on this aspect of the industry. Mining accidents, the other health hazard of underground coal mining, have received less attention. The main purpose of this paper is to show the types of accidents that occur in underground coal mining and to describe the types of injuries sustained by the miners.

### Source of Material

Pike County is located in Eastern Kentucky in the soft coal fields of the Appalachian Mountains. Mining is the main industry in this area. During the time of this study (1971) there were 408 underground coal mines in operation employing 5,649 miners.<sup>2</sup> The Methodist Hospital is located in Pikeville, the county seat. This is geographically near the center of the

county and as such, receives a large number, but not all, of the victims of mine accidents in Pike County.

All of the mining accident victims who were admitted to the emergency room of the Methodist Hospital during the year of 1971 are included in this study. There were 306 admitted to the emergency room for treatment. This number of patients provides a good representation of the types of accidents and injuries seen. The miners who were injured on the job of surface mining operations (strip and auger mining) were not included in this study. The equipment and working conditions in surface mining are entirely different from those encountered in underground coal mining. Because of this, the accidents and injuries are different.

The patients were divided into three groups: The first group of patients were outpatients who were treated and released from the emergency room. The second group is made up of those who were hospitalized for further treatment. The third group were the victims of fatal accidents. All fatalities (13) from the underground coal mining industry in Pike County for the year 1971 are included. Not all were admitted to the Methodist Hospital but sufficient information was available to include them in our study.

### Accidents of the Outpatients Treated and Released

Fourteen per cent of the accidents were roof falls (also called rock falls and slate falls). Most of the roof falls occur at or near the face of the mine where the coal is being mined. This is the area of unsupported roof. With equip-

\*Radiologist, Methodist Hospital, Pikeville

ment and mining practices available, there is little need for any worker to be in the area of unsupported roof. The roof falls injuring the outpatients were simply smaller rocks and/or rocks falling on extremities and areas relatively less vulnerable than in the roof falls of the hospitalized and fatally injured miners.

Table 1

CLASSIFICATION OF ACCIDENTS (220 Outpatients Treated and Released)	
Roof Falls	14%
Haulage	19%
Machinery	24%
Miscellaneous	20%
Small Tools	10%
Electrical	4%
Lifting	4%
Welding	3%
Burns	2%

Haulage accidents are those related to moving the coal, equipment and miners to and from the mine with vehicles. The face of the mine where the coal is being mined may be anywhere from several yards to many miles from the portal. Fast moving electrically-powered cars, whose size is limited by the height of the coal, are used for transportation. Reduced visibility underground contributes to the frequency of haulage accidents. One of the common accidents occurs when the coal cars are being coupled. Fingers are mashed by the coupling pin. The other haulage accidents are collisions, lower extremities being run over and passengers being bumped against the roof and rib (side of the mine). These are the same accidents that are seen in the more severely injured miners but because of reduced speed, protective footwear and increased clearance only minor injury resulted.

Modern mining is a highly mechanized industry and machinery caused most of the accidents in this group (24%). The roof bolter is a self-powered machine which drills and bolts the roof. Some of the less severe injuries occurred when fingers were caught and mashed by the drill or during placement of the bolt. The roof bolting machine also caused some of the lower extremity injuries when it pinned a foot or an ankle to the rib. The continuous mining machine with its many moving parts, electrically-powered scoops and loaders and the conveyor belts were all involved in this group of relatively minor accidents. There were how-

ever more miners injured by roof bolters than any other machine.

There were 20% miscellaneous accidents. No particular pattern was evident in this relatively large group.

Small, non-motorized tools (hammers, wrenches and wire splicing knives) caused 10% of the accidents.

Most of the electrical accidents caused burns. Overheated battery cables and electrical "shorts" caused 4% of the accidents in the treated and released patients.

Three per cent of the outpatients were injured in welding accidents. There were some burns and an ocular foreign body but the most common injury was welder's "flash".

### Injuries of the Treated and Released Outpatients

Nearly one-half of the injuries in the outpatients were contusions and abrasions. (Table 2). This, however, was usually not the primary reason for the emergency room visit. Most of these patients had X-ray examinations to rule out fractures. Contusions and abrasions were diagnosed on the basis of physical findings and negative radiographs. This was also true for the many sprains, most of which were about the foot and ankle.

In this group of patients, the extremities, particularly the distal parts, were the most frequent sites for lacerations and fractures. Fractures of the fingers and toes were most common. There were six fingers traumatically amputated.

There were nine "acute back" cases in the treated and released outpatients. Symptomatically, they were mild.

The one case of "shock" was the driver of a machine involved in an accident in which an-

Table 2

TYPES OF INJURIES (220 Patients Treated and Released)	
Contusions, Abrasions	91
Lacerations	34
Fractures	26
Sprains	18
Eye Injuries	17
Burns	9
"Acute Back"	9
Puncture Wounds	7
Foreign Bodies	6
Traumatic Amputations (digits)	6
Strains	2
"Shock"	1

other miner was killed. There were no visits to the emergency room by patients with obvious conversion hysteria symptoms. There was a paucity of psychiatric diagnoses in the injured miners whose emergency room and hospital records were reviewed.

### Accidents of the Hospitalized Patients

The pattern of accidents of hospitalized patients differed from the pattern of the treated and released outpatients. (Table 3) Thirty-seven per cent of the hospitalizations were the result of roof falls. The severity of the injury is related to the position of the miner when the rock falls and also to the size of the rock. One of the smallest rocks perforated the eye of one of the miners. Because of this he developed a cataract which required surgery. The larger rocks may weigh many tons.

Table 3

CLASSIFICATION OF ACCIDENTS (81 Hospitalized Patients)	
Roof Falls	37%
Haulage	26%
Machinery	16%
Lifting	11%
Miscellaneous	6%
Explosive	1%
Electrical	2%

Haulage accidents caused the injuries in 26% of the hospitalized patients. One of the common accidents occurs when the miner is thrown or bounced while being transported in a mine car and is caught between the car and the roof or rib of the mine. This is called being "rolled". The severity of the injury is related to the close clearance between the mining car and the mine. Most of the haulage accidents are related to the speed of the electrically-powered cars, the confined working area and the reduced visibility. There were several collisions and several workers were pinned between coal cars. In Pike County, the portals of the mines can be very high on the side of the hill. There were several mishaps when cars were inadvertently driven over the sides of the hill. A common haulage accident occurs when the miner is struck by the car or it runs over the leg. This caused several of the lower extremity fractures.

Machinery accidents were responsible for 16% of the hospitalizations. Roof bolting machines were involved in many of the major

machinery accidents. The operators were pinned by the roof bolter to the rib. They lost control while positioning the roof bolter and were caught between the machine and the rib. Because of the very nature of the operation, bolting of the unsupported roof, the operator is in a vulnerable location for roof falls.

Many of the mines have conveyor belts to carry coal from the mine to the outside. Frequent injuries occur when the miners' fingers or extremities are caught up or pinched by the belt.

Lifting roof timbers, sand bags, pieces of rock and coal and equipment accounted for 11% of the hospitalizations. Large cables from power sources to mining equipment are handled by the miners and caused some of the lifting injuries.

The miscellaneous accidents (6%) were mostly falls and tripping and were not unique for underground coal mining.

The explosive accident occurred during a blasting procedure. Most of the mines in this area do not have explosive gas present. Coal dust, unless treated, can be highly explosive but there were no injuries due to coal dust explosions in Pike County in 1971.

All of the power in the mines is electrical. Electric trolleys, high voltage lines and battery powered equipment are potential causes of accidents. However, of the 81 patients hospitalized, only two were hospitalized because of electrical accidents. In both cases, they suffered burns when shorts occurred in high voltage lines.

Table 4

TYPES OF INJURIES (81 Hospitalized Patients)	
Fractures, Dislocations	66
Contusions, Abrasions	23
"Acute Back"	14
Lacerations	9
Sprains	4
Cerebral Concussion	2
Burns	2
Electrical Shock	1
Puncture Wound	1
Contused Kidney	1
Perforation of Eye	1
Total Injuries	124

### Injuries of the Hospitalized Patients

I have studied 124 injuries sustained by 81 miners who were hospitalized. (Table 4) Frac-





FIG. 1: X-ray of pelvis of a 24-year-old miner injured in roof fall. There was traumatic amputation of left leg and severe fractures of pelvis demonstrated here. (The shots are from an earlier hunting accident.)

tures and dislocations accounted for 50% of the major injuries. About one-half of these fractures and dislocations occurred below the knee (lower leg 24% and foot 18%). (Table 5) Most of these were due to roof falls and haulage accidents.

Except for amputations of digits, there were only two other traumatic amputations. One miner's arm was amputated in a conveyor belt and another miner had a leg amputated in a roof fall. The latter patient also sustained severe multiple fractures of the pelvis. (Fig. 1)

Compression fractures of the lower thoracic and lumbar vertebrae, along with the relatively uncommon fractures of the transverse processes, account for 23% of the fractures. (Fig. 2) This specific fracture occurs in roof falls when the miner, working in the crouched position, is hyperflexed by the falling rock.

Fractures of the pelvis, although accounting for only seven per cent of the total fractures, are often quite severe. (Fig. 1, 3 and 4) Because of the frequency of urinary bladder lacerations, cystograms are done if catheterization reveals hematuria.

Contusions and abrasions are important in the management of all mine injuries because of

the difficulty in removing the embedded coal dust. In addition to being a foreign body, this can result in dermal tattooing.

"Acute backs" are the third most common injuries seen. All patients admitted with back pain following acute trauma and those associated with lifting, twisting and falls are included. Several patients in this group were transferred to other hospitals for further care including laminectomy for removal of intervertebral disks.

Trauma requires attention to multiple systems. Mine injuries are no exception. One patient was injured in a roof fall and sustained a large hematoma of the right thigh and contusion of the lower back. A urinalysis on admission demonstrated hematuria and an intravenous pyelogram was performed. There was incomplete filling of the renal pelvis on the right. (Fig. 5) Two weeks later, a retrograde pyelogram showed no abnormality. The discharge diagnosis was contusion of the kidney with hemorrhage.



FIG. 2: Lateral lumbar spine x-ray of a 28-year-old miner who was injured in a roof fall. His trunk was "jack-knifed" and he sustained a compression fracture of L-1, characteristic fracture seen in this type accident.

Table 5

Frequency of Areas Involved with Fractures and Dislocations	
Lower Leg	24%
Vertebra	23%
Foot	18%
Pelvis	7%
Facial	7%
Rib	6%
Forearm	4%
Shoulder	3%
Arm	3%
Thigh	3%



FIG. 3: (Case 1) X-ray of the pelvis of a 51-year-old miner fatally injured in a roof fall. There is a fracture separation at the symphysis and sacro-iliac dislocation on the left. A laceration of the bladder was demonstrated by extravasation of contrast media.

### Fatal Accidents

During the year 1971 there were 13 miners killed in 10 mine accidents in Pike County. Except for roof falls being the most common type of fatal accidents, there was no particular pattern to the accidents. (Table 6) Five of the 13 fatalities were due to roof falls.

The two deaths due to machinery were crushing types of injuries. A loading machine was responsible in both cases for these deaths. A loading machine is a piece of equipment that is used to pick up the coal and, by means of built-in conveyor, move the coal to a car for removal from the mine. In two separate accidents, the victims were caught between the loading machine and the coal rib. In one case the victim was the operator of the loading machine and in the other instance, another miner, not the operator, was caught between the loader and the coal rib.

The two deaths that were caused by explosion occurred when some explosives were accidentally detonated during a blasting procedure.

The electrocution occurred during the moving of a small pump which was submerged in water.

Two welders were killed in a fire when an oxygen tank was accidentally dropped on the trailing electric cable of a piece of mining equipment. This burned a hole in the tank and ignited the oxygen.

The death due to suffocation occurred on the surface. The victim was covered with coal in a

storage bin of an underground mine. Another worker was also covered with coal but fellow workers were able to rescue him although he did sustain a fracture dislocation of the right hip.

### Fatal Injuries

Two of the miners were killed instantly by roof falls. In both of these cases the cause of death was severe crushing injury to the head. Three of the victims of roof falls died following admission to the hospital.

*Case One:* A 51-year-old miner was admitted in shock after being injured in a roof fall in the mines. Blood replacement was carried out. X-ray examination showed multiple fractures of the pelvis. A cystogram demonstrated extravasation of contrast media outside the bladder. (FIG. 3) He underwent surgery for closure of the laceration of the bladder. During his hospitalization blood pressure was difficult to maintain at a normal level. He died less than 24 hours after admission. Autopsy examination revealed, in addition to the fractures of the pelvis, multiple rib fractures involving the 2nd, 3rd, 4th, 5th, 6th, 7th and 8th ribs on the left. There was hemothorax, hemoperitoneum and retroperitoneal hemorrhage.

*Case Two:* A 51-year-old miner was admitted following injury in a roof fall. On admission he was in shock and actively bleeding from a large scalp laceration. Blood replacement was started and the laceration was closed with 60 sutures. This was done in the operating room under light general anesthesia. X-rays on admission showed a comminuted fracture of the distal ulna with avulsion of the muscle group in this region. There was compression fracture of T-9 and a linear skull fracture in the parietal region. Following the initial episode of shock which was present on admission, there were no further episodes of hypotension. The patient's clinical course was satisfactory until

Table 6

CLASSIFICATION OF FATAL ACCIDENTS	
Roof Falls	5
Machinery	2
Explosion	2
Electrical	1
Fire	2
Suffocation	1
	<hr/> 13



the fifth day of his hospitalization at which time he became somewhat restless and was noted to be hyperventilating. Laboratory study at this time showed BUN of 308 mg%,  $\text{CO}_2$  combining power 7.3 mEq/L, sodium 141 mEq/L, potassium 6.3 mEq/L, chloride 102 mEq/L, and 4 + proteinuria. The patient expired on the tenth hospital day in renal failure.

**Case Three:** A 56-year-old miner was admitted following a roof fall. X-rays on admission showed extensive fractures of the pelvis involving the left acetabulum, proximal femur and separation of the sacro-iliac joint on the right. (Fig. 4) The bladder was intact. Thirty-six hours after admission a temperature elevation was noted. X-ray examination of the abdomen showed a non-obstructive distention of the bowel. On the day of his demise, although he had shown some clinical improvement, he suddenly vomited 500 cc of blood and died. Autopsy was obtained and revealed, in addition to the multiple fractures of the pelvis, stress ulcers of the stomach and multiple tears in mid jejunum, transverse colon and recto-sigmoid, with peritonitis.

The two deaths that occurred as a result of machinery accidents died at the scene of the accident. Both of these victims received crushing injuries to the head and upper parts of their bodies.

One of the victims of the explosion was dead on arrival. External physical examination of the body showed numerous small lacerations of the face and embedded coal particles. The other victim survived for five and one-half



FIG. 4: (Case 3) X-ray of pelvis of a 56-year-old miner fatally injured in a rock fall. There are multiple fractures and separation of the symphysis and the right sacro-iliac joint. Death was due to peritonitis secondary to multiple tears in the bowel.



FIG. 5: Tomogram made during intravenous pyelography of a 48-year-old miner injured in a rock fall. There is incomplete filling of the collecting system on the right. A retrograde pyelogram done two weeks later was normal indicating clearing of the blood clot due to contusion.

hours after admission. The cause of his death was anoxia secondary to blast injuries to the lung. The chest X-ray on admission showed bilateral pulmonary infiltrations. (Fig. 6) The primary pathology in blast injury is destruction of the alveoli with hemorrhage into the alveoli and interstitial space.

The worker that was electrocuted was dead at the scene as was the miner that was covered with coal and suffocated.

The two burn victims survived long enough to reach the hospital. One of the burn victims received second and third degree burns over 75% of his body. He survived for 33 days. The other victim received second and third degree burns over 85% of his body. He survived for seven days.

### Summary

There were more roof falls than any other type of accidents. These caused the most severe injuries including five deaths. The pelvic fractures usually are quite severe and may lacerate the urinary bladder. Compression frac-





FIG. 6: Chest x-ray of 22-year-old miner fatally injured in a blasting accident. There are bilateral pulmonary infiltrations characteristic of blast injury.

tures of the vertebrae, most of which were also caused by roof falls, are the second most common fracture.

The most common area for fracture was the leg below the knee. This area is vulnerable not only in roof falls but also in the haulage and machinery accidents. There is protective footwear for the toes and metatarsal area but no safety equipment is available for the area around the ankle.

Haulage accidents and injuries are related

to the speed of the cars, close clearance with the roof and rib, and to reduced visibility. One of the accidents unique for this group is being "rolled" by the roof or rib.

The roof bolting operation caused the largest number of machinery accidents. Fingers were caught in the drill and by the bolt, some operators had their leg pinned to the rib and some were involved in roof falls.

The "acute back", although not unique for this industry, was the third most common injury of the hospitalized patient. Lifting accidents accounted for 11% of the hospitalizations.

Head injuries are uncommon. This may be related to the widespread use of the hard hat in underground coal mining.

### Conclusion

This is a preliminary study of the mine injuries seen at the Methodist Hospital, Pikeville, Kentucky, in 1971 and includes all the fatal accidents in Pike County. It shows that there is some pattern to the type of accidents and injuries in underground coal mining.

### Acknowledgement

I am grateful to Max P. Jones, M. D., Elvis R. Thompson M. D., and Mr. Everett Brown for their suggestions in the preparation of this paper.

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# Determination of Fetal Maturity By Spectrophotometric Creatinine and Cytologic Study of the Amniotic Fluid†

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*The results of the use of spectrophotometric analysis, creatinine content and cytologic study of the amniotic fluid in relation to fetal maturity are presented.*

**E**STIMATION of fetal maturity by menstrual history, clinical evaluation and radiology are notoriously subject to error. The limitations imposed by these methods are critical when medical, and/or obstetric complications indicate pre-term delivery. Precise knowledge of fetal age would be invaluable in selecting the time to carry out an indicated or elective interruption of pregnancy.

The optical deviation, creatinine and cytology of amniotic fluid have all been reported to indicate fetal maturity.<sup>1-6, 8, 10, 13-18</sup> In this study we have used these three methods individually and as a group in an attempt to more closely determine fetal maturity.

## Material and Methods

Two hundred and twelve specimens of amniotic fluid from 150 prenatal patients were examined at various stages of gestation. The fluid was obtained from an obstetrically high risk population attending the clinics of the University of Louisville Medical Center. Amniocentesis was performed according to the technique described by Mandelbaum<sup>12</sup>, usually on an outpatient basis. Placental localization was performed only on rhesus negative patients. Ten milliliters of amniotic fluid was removed from each patient and analyzed for the three parameters previously mentioned.

The  $\Delta O.D.$  at 450 millimicron was determined by the method of Liley<sup>11</sup>. Creatinine was determined by a modified Jaffe' picric acid method using the micropipette<sup>9</sup>. The cytologic count was performed immediately after obtaining the fluid specimens. The staining technique was that of Brosens<sup>2</sup> and 500 cells were counted on two separate slides. The gestational age was calculated from the menstrual history. All statistical calculations were performed with an IBM 1130 computer using the Stepwise linear regression formula<sup>7</sup>.

## Results

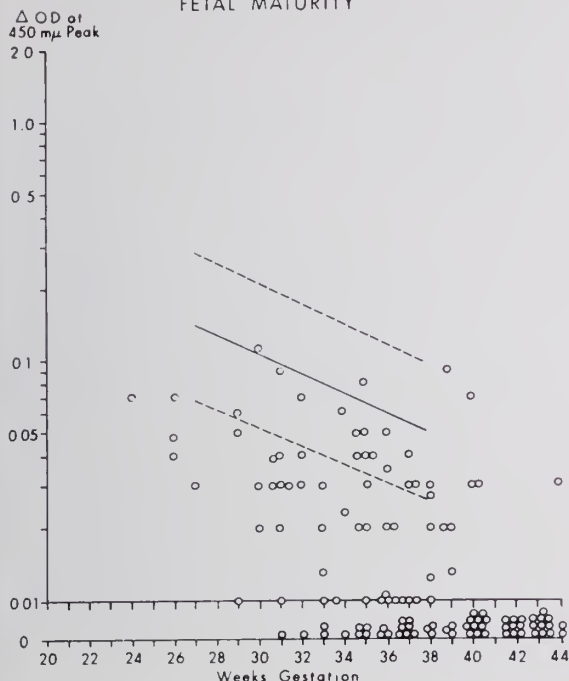
Optical deviation at 450 millimicrons ( $m\mu$ ) as an index of fetal maturity is depicted in Figure 1 which demonstrates the marked decrease in the  $\Delta OD$  as term approaches in pregnancies not complicated by Rh sensitization. There were 16% of the cases beyond 36 weeks gestation in which the optical deviation was greater than .00 reading at 450  $m\mu$ . For example, two patients with toxemia and four patients with diabetes mellitus appeared to have a higher optical deviation for their gestational age than normal population.

Creatinine content was determined in 212 specimens at various stages of gestation and are illustrated in Figure 2.

These creatinine values in Figure 2 were separated into categories, relating to complications of pregnancy. Eighty-two specimens were from normal pregnancies and exhibit a generally increasing trend as fetal maturity is approached. One hundred and nineteen specimens were from pregnancies complicated by Rh sensitization and exhibit the same generally increasing trend as term is approached. Also included are specimens from pregnancies complicated by diabetes and toxemia. Eighteen per cent of the pregnancies prior to 36 weeks were

†Presented in part at the American College of Obstetricians and Gynecologists, Miami, Florida, May, 1969. From the Department of Pediatrics and Obstetrics, University of Louisville School of Medicine, Louisville. Supported by General Research Support Grant (FR 5357).

# $\Delta OD$ AT 450 $m\mu$ AS AN INDEX OF FETAL MATURITY



above the 2 mg%, usually indicating fetal maturity.

Analysis of the creatinine data (Table 1) showed a value of creatinine in the amniotic fluid above 2 mg% was indicative of fetal maturity, within 95% confidence limits.

Our results for the determination of fetal age by cytologic count are presented in Figure 3 and show a general increase in the appearance of orange staining sebaceous cells as maturity is approached.

A value of 10% orange staining cells did indicate fetal maturity in the majority of our cases.

Table 2 shows the predicted age for a given cytologic determination within 95% confidence limits. A cytology count of 10% orange cells

indicated a pregnancy of 36 weeks within 95% confidence limits. A cytology count of 20% orange cells indicated a pregnancy of 40 weeks within 95% confidence limits.

## Comments

Mandelbaum, LaCroix and Robinson<sup>13</sup> were the first to report a significant correlation between the  $\Delta OD$  at 450  $m\mu$  in the amniotic fluid and gestational age. Serial analysis of amniotic fluid in their series showed a progressive decrease in the  $\Delta OD$  at 450  $m\mu$  until it disappeared near term. Cherry in 1967<sup>6</sup> confirmed the results of Mandelbaum in the analysis of over 300 amniotic fluids but found that 10% of the fluids of non-Rh sensitized patients after 36 weeks do have a  $\Delta OD$  at 450  $m\mu$  as measured by the Liley method. Our findings have been similar to Cherry in that 16% of our fluid samples did have a  $\Delta OD$  at 450  $m\mu$ . This is one of the major disadvantages to using the  $\Delta OD$  at 450  $m\mu$  as an indicator of fetal maturity. Other drawbacks to be considered are that when one is measuring very small amounts bilirubin pigment and brief exposure to light invalidates the test, as does contamination of fluid sample with blood or meconium. Although as our results indicate, once the  $\Delta OD$  at 450  $m\mu$  becomes .00 fetal maturity is almost assured. There are 16% of pregnancies at term, which in our hands, show bilirubin in the amniotic fluid of non-Rh sensitized patients. Optical deviation was of value when the cytology and creatinine values were equivocal and the 450  $m\mu$   $\Delta OD$  showed no deviation.

## CREATININE AS AN INDEX OF FETAL MATURITY

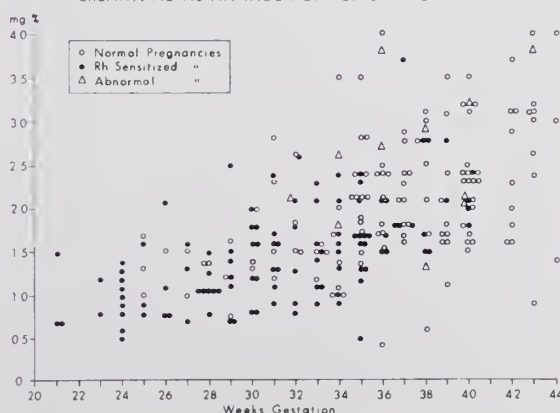


Table 1

Predicted Age from Creatinine Values	
Weeks	mg %
22	0.5 -0.9
24	0.75-1.0
26	0.9 -1.2
28	1.2 -1.4
31	1.4 -1.6
33	1.6 -1.8
35	1.8 -2.0
38	2.0 -2.2
40	2.2 -2.4
42	2.3 -2.6



Table 2

Predicted Age from Cytologic Values	
Age (weeks)	% Orange Cells
30	0
31	0
32	0
34	4-8
35	8-12
37	12-16
38	15-19
40	19-24
41	22-28
42	25-32

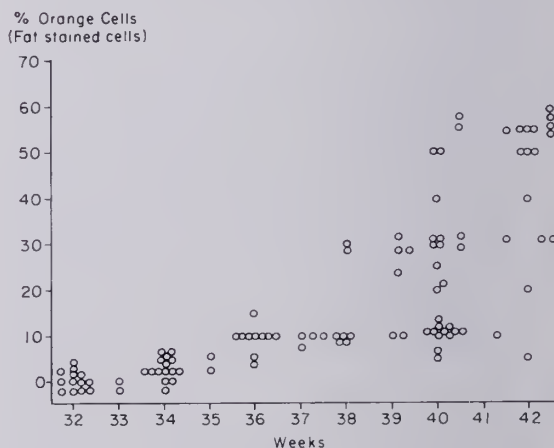
Woyton<sup>19</sup> in 1963 was the first to note a progressive rise in the creatinine values of amniotic fluid as the fetus approaches term. Pitkin<sup>16</sup> in 120 amniotic fluid samples correlated the value of 2 mg% creatinine in the amniotic fluid with fetal maturity. He found no difference in the creatinine values in complications of pregnancy, confirming Kornacki's<sup>10</sup> work. Our results indicate that creatinine is a good laboratory test for the estimation of fetal maturity and reconfirm that creatinine does not change in complications of pregnancy. A reading of 2 mg% creatinine was indicative of fetal maturity with 95% confidence limits. It is significant that 18% of the fluid samples showed erroneously high creatinine readings prior to 36 weeks gestation. Thus, using only a creatinine of 2 mg% to indicate fetal maturity, one would occasionally deliver an infant that was less than the predicted age.

Our creatinine values are somewhat higher than those being reported possibly relating to the individual laboratory used for creatinine determination. Mandelbaum<sup>12</sup> reported that creatinine was of limited value in the estimation of fetal maturity, but his results were lower than those we have reported. Droegemueller<sup>8</sup>, correlating creatinine with fetal maturity, found it to be the most reliable. With the varying reports in the literature, the use of creatinine alone for the determination of fetal maturity cannot be recommended. It is important, as stated by Mandelbaum<sup>12</sup>, that each laboratory establish its own reliable values for amniotic fluid creatinine levels when relating to fetal maturity.

The cytologic staining for the estimation of fetal maturity has been investigated by Brosens and Gordon.<sup>2-5</sup> Bishop and Corson<sup>1</sup> confirmed the results of Brosens and Gordon using over 350 samples of amniotic fluid. They found that

there were no premature infants by either weight or age when the sebaceous cell count was greater than 20%. Sharp<sup>16</sup> confirmed the increasing sebaceous cell count as term approached but after 35 weeks found many cell counts below that expected. In these cases there were particles of vernix caseosa visible to the naked eye. The author states that this must also be taken into account when estimating fetal maturity. As presented, the cytologic study of the amniotic fluid and the determination of fetal maturity is the most reliable in our hands. The most serious drawbacks to this method are the technical problems which can be overcome if the staining and the cell count are performed before slide drying occurs. A reading of 10% fat laden cells is consistent with maturity but due to some overlap at the 10% figure the 20% reading is the best indicator of fetal maturity. A reading of 20% orange staining cells in our study indicated a pregnancy at term within 95% confidence limits.

NILE BLUE SULFATE STAIN OF AMNIOTIC CELLS AS AN INDEX OF FETAL MATURITY



In order to narrow the gray zone that exists between prematurity and maturity, an attempt was made to statistically combine the three parameters. Optical deviation was not used in the statistical correlation because the only factor to be considered was either the presence or absence of the  $\Delta OD$  at 450 m $\mu$  in the amniotic fluid. The creatinine and the cytologic count of the amniotic fluid were so closely related that the results did not vary statistically when the parameters were combined.

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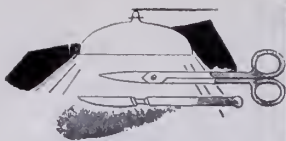
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# GRAND ROUNDS



The University of Louisville School of Medicine

This Journal feature will be presented alternately by the University of Louisville and the University of Kentucky Departments of Medicine and Departments of Surgery. We hope to have these features revolve around subjects of immediate practical interest to the practicing physician; and, for those of us not able to attend grand rounds in the teaching centers as often as we might, we hope this will represent a bit of a refresher course.

## Hypokalemia Due to Massive Villous Adenoma of the Rectum

A 62-year-old man was admitted to his local hospital on May 8, 1972, with a history of a crushing chest pain and generalized weakness. Because of persistent myocardial irritability and mild hypotension he was transferred to the Norton Memorial Infirmary that afternoon. Upon admission to the coronary care unit, he gave a history of two months of intermittent diarrhea with increasing weakness and arthritis of vague definition.

Physical examination showed a lethargic, well developed, well nourished white man with a uremic breath and moderate dehydration. He was noted to pass a copious mucous diarrhea. His blood pressure was 92/60 mmHg, his pulse 80 min and irregular, respirations 20/min, and his temperature was 98.0°F. The lungs were normal to percussion and auscultation. The heart was not enlarged and no murmurs or abnormal sounds were appreciated. The abdomen was soft with mild distention in the lower quadrants. A rectal examination was interpreted as normal. The neurologic examination was grossly normal.

Laboratory examination on admission: Hemoglobin—15.8 gm%, Hematocrit—44.4%, W B C—17,900/mm<sup>3</sup> with 70% polymorphonuclear leukocytes, 6% band forms, 10% lymphocytes and 4% mononuclear cells. The urine had a specific gravity of 1.013, a pH of 5.0, 1+ albumin and no sugar. The microscopic examination showed 4-8 white blood cells/high powered field and 1-3 red blood cells/high powered field. The blood urea nitrogen and serum electrolytes are given in Table I and the blood glucose was 160 mg%, calcium—9.7

mg%, phosphorus—5.4 mg%, total protein—7.0 mg%, albumin—4.4 mg%, bilirubin—1.3 mg%. The arterial blood gases indicated a pH of 7.56, pCO<sub>2</sub> of 43, and pO<sub>2</sub> of 97. In addition, a stool smear showed no marked abnormalities. The chest x-ray was normal. The electrocardiogram was interpreted as abnormal with an abnormal ST-T segment consistent with myocardial ischemia, frequent premature ventricular contractions, and occasional ventricular bigeminy.

His initial therapy consisted of fluid and electrolyte replacement requiring 7.7 L. of fluid in the first 36 hours, including 120 mEq of potassium chloride. His myocardial irregularity was controlled with a two per cent xylocaine drip which was necessary for only an 18-hour period. The persistent diarrhea was only minimally reduced by Lomotil.

By the fifth day, his electrolyte concentrations were stable. The blood urea nitrogen and phosphorus were normal at 17 mg% and 3.8 mg%, respectively. The electrocardiogram was normal showing no ST-T segment changes. The patient had become ambulatory and was eating a regular diet. Subsequent rectal examination was considered compatible with a large soft villous adenoma.

Sigmoidoscopy on May 24, 1972, demonstrated a large villous tumor of the rectum. This lesion arose 4 cm from the anal verge and extending up to 12 cm. It completely encircled the bowel. The tumor grossly appeared benign with no areas of ulceration or induration. Multiple biopsies were performed and reported as benign (FIG. 1). The following day a barium enema was normal except for the rectal lesion.

On May 30, 1972, transanal excision of the lesion was undertaken. This was abandoned after subtotal removal because of blood loss

†From the University Surgical Service, Nortons Children's Hospital and Department of Surgery, University of Louisville School of Medicine, Louisville



TABLE 1  
Intake and Output Record for First Week  
of Hospitalization

Hospital Day	1	2	3	4	5	6	7
Oral	710	2145	2605	1390	440	2190	3040
5DRL	1250	3000	2300	1700	2800	2790	
Na MEQ/l.	170	405	312	225	378	378	
K MEQ/l.	50	120	92	68	112		
STOOL (Mucus)	500	600	300				
URINE	1450	3550	2600	3200	2700	3000	3600

\* I.V. ELECTROLYTES ONLY

approaching 1,000 ml. Subsequently a posterior approach, using the Kraske technique, afforded improved exposure to the tumor.

L. G. Schrock, M. D. (Instructor in Surgery)\*: The patient we presented today exemplifies the major characteristics of villous tumors of the colon with the addition of the depletion syndrome. About 70 case reports are accessible on this syndrome. Virtually all began as a diagnostic dilemma. The patients often present in a stuporous state in varying degrees of circulatory collapse. Because of this, such diagnoses as diabetes, uremia and acute adrenal insufficiency are often entertained.

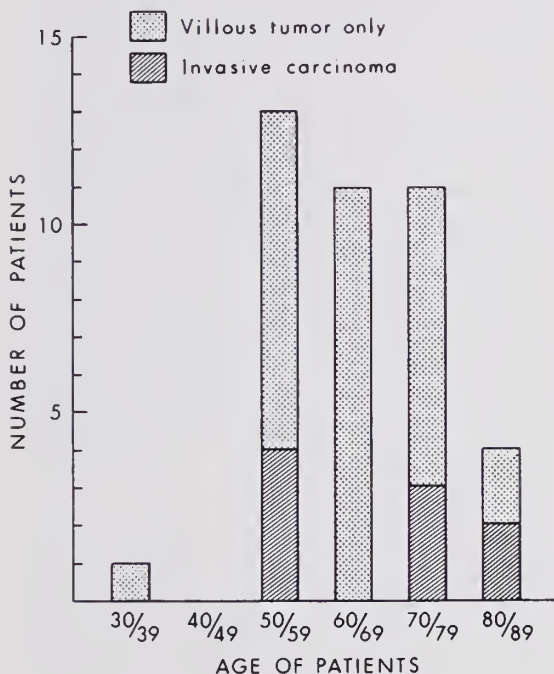
The major symptoms of rectal bleeding, change in bowel habits and abdominal discomfort seen in most villous tumors are overshadowed by the presence of a persistent, profuse, non-irritating watery diarrhea. This usually leads one to the diagnosis, which is made in over 90% of the cases by sigmoidoscopy.

The loss of fluid and electrolyte causes the triad of hyponatremia, hypokalemia and hypochloremia. The patient may be in metabolic alkalosis or acidosis depending on the state of his circulation. All the patients who presented with acidosis had some degree of hypotension and pre-renal azotemia.

The correction of the acid-base problem is not difficult, but it must be remembered that, until the tumor is removed in some manner,

the electrolyte problem persists and requires continuing treatment.

Figure 1 shows the age distribution of a group of tumors producing hypokalemia. The tumors occur primarily in the rectum and are consistently low tumors, the vast majority occurring at 4—6 cm from the anal verge. They also are larger than the usual villous tumor, having an average length of 10 cm and an average width of 9 cm.



The gross characteristics are of a soft, reddish-gray sessile lesion with frond-like projections which usually fills the sigmoidoscope. On initial examination ulceration and induration must be looked for as hallmarks of invasive carcinoma. This, however, can be a misnomer and about 20% of clinically benign lesions will prove to harbor invasive cancer. The microscopic characteristics of these tumors are similar to those of villous adenomas uncomplicated by marked electrolyte deficiencies. The villous projections show a core of stroma covered with a single layer of columnar epithelium which is inundated with large, over distended goblet cells.

Further studies indicate that the frequency of cancer is not different among those adenomas producing hypokalemia from that which prevails in the ordinary variety. The overall incidence of cancer is 22% which leads to the final point, namely therapy.

This lesion has been treated in every manner

\*This work was conducted during Doctor Schrock's tenure as Clinical Fellow of the American Cancer Society, 1971-72.

and form, from local excision or fulguration to abdomino-perineal resection. The literature is not consistent in its remarks and places the burden of judgement on the patient's physician(s).

The most rational approach seems to involve consideration of the size and location of the tumor and the tolerance of the patient.

If the lesion is relatively small and below 8 cm it should be excised by a transanal or the Kraske approach (posterior approach). If this turns out to be carcinoma, then a cancer resection is warranted. If the lesion is huge or totally encircles the rectum and is below 8 cm, abdomino-perineal resection may well be necessary. There may be a few patients with a short circumferential lesion that both rectal ends can be reapproximated after removal of the tumor. If the lesion is massive and/or lies above the 8 cm level, a low anterior resection or pull-through procedure should be considered.

Any lesion above the peritoneal reflection should have adequate resectional surgery with margins performed because these lesions tend to harbor invasive cancer more frequently than the rectal lesions.

As a final comment, the incidence of concomitant malignancies is 15—20% in this group, especially in the gastrointestinal tract. Complete evaluation is necessary. This may simply be related to an older age group or may have some greater specificity.

*Sam Weakley, M. D.* (Associate Clinical Professor of Surgery): I have had occasion to treat a similar patient and likewise had difficulty obtaining control of the villous adenoma. It may well be that such very large lesions, as appears to be the case in this man, will require more radical treatment regardless of the presence or the absence of cancer.

*Don Buckner, M. D.* (Assistant Clinical Professor of Surgery-Pediatric): A useful technique in reconstructing these individuals, allowing an adequate excision, but at the same time preserving anal function and competence, would be that which Soave has described for the management of Hirschsprung disease.

*Truman Mays, M. D.* (Associate Professor of Surgery): I would suggest that repeated operations in an attempt to preserve anal function in patients with this disease may become a malignant disease in and of themselves. The complications of these repeated efforts and

TABLE 2  
Certain Laboratory Values for the Initial  
Hospitalization

DAY	1	2	4	6	9	12	13	14	16	19
HCT	44.4				30.5		27.3	29.7		27.7
SA	123	128	132	132	138	156	135	138	142	135
K	2.6	3.2	4.8	5.1	3.7	3.0	3.2	3.8	4.7	4.9
CO <sub>2</sub>	44	44	26	27	29	36	39	37	33	26
CL	60	77	88	98	98	83	87	90	100	99
pH	7.56									
BUN	98	42	13	17	17	16	15	17	9	10

their high frequency of failure are such that I have tended to treat such patients by primary abdomino-perineal resection and permanent colostomy. I think this puts the overall risk of repeated operations in an elderly patient group in a little more acceptable perspective.

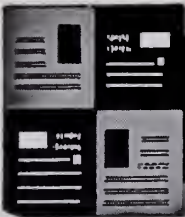
#### Subsequent Patient Course

The patient did well for a few weeks following this Kraske excision of tumor. He had marked irritative symptoms related to circumferential destruction of the rectal mucosa. An initial follow-up examination two weeks later showed no evidence of tumor but four weeks after extirpation of the tumor there was residual, identifiable villous adenoma both at the upper and lower margin. Accordingly he was readmitted to the hospital and major resectional therapy recommended.

The patient strongly preferred an attempted abdomino-perineal resection with pull-through anal anastomosis. This was accomplished with substantial difficulty due to the inflammation induced by the previous procedures, but a diverting colostomy was not felt warranted. The patient's early postoperative course was smooth but on the fifth through the tenth postoperative days he showed signs of progressive perineal sepsis which eventuated in the drainage of a perirectal abscess, presenting as a defect in the posterior midline of the colo-anal anastomosis. This was treated like a fistula in ano and slowly resolved after discharge home with excellent healing and very good anal continence. At the time of the last follow-up no residual tumor was present and the patient was convalescing satisfactorily.

L. G. Schrock, M.D., William A. Blodgett, M.D., Hiram C. Polk, Jr., M.D.





## SPECIAL ARTICLES



### MECO—Medical Education and Community Orientation

DAVID MOSS\*

THE availability of health care in the United States has become a topic of increasing concern to both health professionals and the general public. Although the physician-to-population ratio for the USA is higher than for most other countries (including Great Britain our shortage is compounded by ethnic maldistribution of medical personnel. "Relatively few physicians tend to be located in rural areas . . . and in low income areas generally."<sup>1</sup> This tendency has not improved in the past decade; on the contrary, the number of counties in the U.S. without an active physician (not including government-employed physicians) increased by 34% in the eight-year period from 1963 to the beginning of 1971.<sup>2</sup> With the reversal of this trend as one of its long-range goals, SAMA established the MECO Project in 1970.

MECO provides pre-clinical medical students an opportunity to spend 8-10 weeks learning about a community's total health care system. The students rotate through each department of the community hospital and learn the function of each in relation to total care of the patient. In addition, they spend time in physicians' offices and may follow specific patients from the physician's office through a hospital stay and back to the physician's office. The students also visit health-related agencies in the community, such as nursing homes, mental health facilities, rehabilitation centers and local medical associations.

The MECO program is flexible to allow the student to participate with the physician in developing his own educational program. Emphasis is placed on exposing the student to the lifestyle of the community physician, to the function and operation of the community hospital, to the interaction of all facets of the com-

munity as related to health care, and on helping him to appreciate the basic concept of patient-oriented health care.

MECO also affords Kentucky's practicing physicians the chance to give these students exposure to clinical medicine from the eyes of a practicing physician.

The student may discover just how relevant the putative "esoterica" of basic science is to the actual practice of medicine, and first-hand orientation to surgery, obstetrics and medical rounds will engender a more tangible grasp of these basic sciences. A MECO participant often develops greater respect for rural medicine and establishes close friendships that encourage him to return to practice in that community.

Participants in the 1972 Kentucky MECO project had very successful programs, and we are now in the process of soliciting additional hospitals and physicians throughout the State for the summer of 1973. Each student is paid an educational stipend and most are furnished room and board. Students are encouraged to participate in MECO in their home state, but a few "out-of-state" positions were available in 40 states last summer.

Endorsed by KMA, KHA, KAFP, Blue Cross and Blue Shield, and our two medical schools, MECO is attempting to locate positions for many of the 400 medical students interested in the program for the summer of 1973.

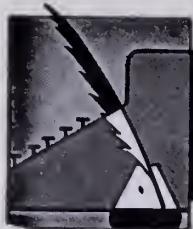
For additional information, contact Phil Aaron, MECO State Director, University of Louisville School of Medicine, Health Sciences Center, Louisville, Kentucky 40202.

#### References

1. Steinwald, Bruce. "The Supply and Distribution of Physicians," p. 110 in *Reference Data on Socioeconomic Issues of Health*, Ed. Robert J. Walsh and Phil Aherne, Chicago: Center for Health Services Research and Development AMA, 1972.
2. Walsh, Robert J. "Practice Characteristics of General Practitioners in Rural and Urban Areas," p. 110, in *Reference Data on the Profile of Medical Practice*, Ed. Robert J. Walsh, et. al., Chicago: Center for Health Services Research and Development, AMA, 1972.

\**Sophomore medical student from Glasgow, Kentucky attending the University of Louisville School of Medicine, Louisville*





## EDITORIALS



### Consumerism

THE Great American Consumer Movement is stalking the Great American Health Delivery Industry and our efforts to understand and influence such devices as health insurance, health maintenance organizations, foundations for medical care and federal government participation will be diluted by the necessity for us to attend to consumerism. It is not our ability to successfully relate to the actual consumer, the patient in bed before us, which will generate dispute but the ability of committees of physicians relating to the consumer's advocate. The advocate's stature is very large by virtue of his taking, or being given, identity with consumers of whom there is a population explosion.

On October 28, 1972, in Memphis at the joint meeting of the Tennessee and Kentucky Societies of Internal Medicine, the T.S.I.M. presented a panel entitled *Consumerism in Medicine—an Exercise in Bio—Medico—Prolepsis*. Gerald I. Plitman, M.D., moderated the panel, otherwise composed of Morton D. Bogdonoff, M.D., chairman of the Department of Medicine, University of Illinois and editor of the *Archives of Internal Medicine*; Mr. Richard Johnson, Regional Director of Medicare—Medicaid Administration, Equitable Life Assurance Company, Nashville; John D. Young, M.D., Past President, Tennessee Society of Internal Medicine, Memphis; Gene H. Stollerman, M.D., chairman, Department of Medicine, University of Tennessee College of Medicine, Memphis, and William C. Felch, M.D., President-Elect, American Society of Internal Medicine, Rye, N.Y.

The panelists agreed they had not previously dealt with this subject and agreed that deal with it we must—that it will not simply go away if ignored.

Consumers were identified as variable from the most intimate, the patient, to the most re-

mote, the Federal Government and intermediary degrees: the physician's office staff, the hospital staff, the hospital administration, insurance carriers and students of medicine.

*The government.* A central problem, as usual, is proper communication. If indeed representatives of medicine and government are in heated disagreement, they may be talking and thinking on disparate levels of a subject so that agreement is impossible because grievances overshadow the purpose of trying to solve one problem. When one accepts the actual necessity of communicating with the government, bitterness must be exorcised. Another pertinent point is that medicine tends to deal with government's elected officials. These good public servants are subject to variable tenures and even when in greatest power are necessarily influenced tremendously by the members of bureaucracy who are permanent members of government and have a very distinctive power. They need to be talked with as well. The American Society of Internal Medicine is trying to do this.

The emergence of "the fourth party", doctors unionized, may be another means of communication with government but, at first blush and considering historical union methods, would seem unlikely to lead to the *reasonable agreements* which are going to be essential between government and medicine.

*The patient.* Is he satisfied with the medical care he receives and the price that is paid? The more the third party involvement, probably the less the patient's concern for cost but here the consumer's advocate involves himself and such patient apathy may be the soundest basis for the consumer advocate despite the seeming paradox. An example is concern that a part of this patient's bill pays for education of physicians and this education had no direct influence on the patient's care.

The care the patient receives, however, is a subject which always interests him. He mourns the loss of the old time complete doctor. He wants the very best but does not like to be segmented into organs. Beseiged by four doctors instead of one, he is confused by values and procedures he wants to understand but cannot.

Doctor Stollerman wisely compared the patient and his doctor to a child and his father. The father does not angrily refuse the child what he thinks he wants but with patience

guides the child to what he really wants. We do this, doctor and patient, everyday. We complain among ourselves that we must communicate to patients patiently but we are proud of how well we do it. The patients' advocate will require much more of this.

And now for prolepsis: the representation or assumption of a future act or development as if presently existing or accomplished. BE PREPARED!

A. EVAN OVERSTREET, M.D.

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### Have You Moved Recently?

Please send any change of address to *The Journal of the Kentucky Medical Association*, 3532 Ephraim McDowell Drive, Louisville, Kentucky 40205. We need your help in keeping our mailing list up to date. You are our best source of information.

### Notice To Contributors

Members of the Kentucky Medical Association reading papers before other organizations are asked to submit their papers to *The Journal* for consideration by the Editors for publication. Detailed instructions to contributors appear in the Scientific Section of *The Journal* under Manuscript Memos. Please forward any papers to:

Charles C. Smith, Jr., M.D., Scientific Editor  
The Journal of the Kentucky Medical Association  
3532 Ephraim McDowell Drive  
Louisville, Kentucky 40205



## ORGANIZATION SECTION



### March 29-30 Are Dates For '73 Interim Mtg.

Physicians attending the annual KMA Interim Meeting at Lake Barkley Lodge, Cadiz, March 29-30, will hear state and national speakers deal with "The Challenge of Health Care Delivery."

A panel discussion on "Some Approaches to Health Care Delivery" will open the two-day session which will include sessions on all facets of health care. AMA's views, as well as those of the consumer, the hospital and the government, will be presented.

No meetings are scheduled after noon on Thursday, March 29, and Friday, March 30, so that KMA members, their families and guests can utilize the many recreational facilities offered at Lake Barkley.

The annual Thursday evening dinner will begin at 6 p.m. with a social hour hosted by the Pennyryle Medical Society.

Other details of the 1973 Interim Meeting will be available in forthcoming issues of the *KMA Journal* and *Communicator*.

### KEMPAC Officers and Board Listed for 1972-73

The KEMPAC Board of Directors re-elected three of its 1971-72 officers for the 1972-73 Organizational year at a meeting on November 9 in Louisville. Fred C. Rainey, M.D., Elizabethtown, KMA President-Elect, was re-elected Chairman of the KEMPAC Board by acclamation.

Re-elected as Vice-Chairman was Mrs. Hoyt D. Gardner, Louisville, and as Treasurer, Cecil L. Grumbles, M.D., Louisville.

Carl Cooper, Jr., M.D., Bedford, was elected Assistant Treasurer and Mrs. William Pearson, Owensboro, was named KEMPAC Secretary.

The following is a list of the KEMPAC Board members for the 1972-73 Organizational year:

#### First Congressional District

Bennett L. Crowder, M.D., Hopkinsville  
Stephen Burkhart, M.D., Salem

#### Second Congressional District

John S. Oldham, M.D., Owensboro  
Fred C. Rainey, M.D., Elizabethtown

#### Third Congressional District

Sam A. Overstreet, M.D., Louisville  
Cecil L. Grumbles, M.D., Louisville

#### Fourth Congressional District

Carl Cooper, M.D., Bedford  
C. Kenneth Peters, M.D., Louisville

#### Fifth Congressional District

Donald C. Barton, M.D., Corbin  
William O. Massey, M.D., Burnside

#### Sixth Congressional District

John E. Trevey, M.D., Lexington  
Dallas Hagg, M.D., Frankfort

#### Seventh Congressional District

Garner E. Robinson, M.D., Ashland  
Harvey A. Page, M.D., Pikeville

#### Represent Woman's Auxiliary

Mrs. Hoyt D. Gardner, Louisville  
Mrs. William Pearson, Owensboro  
Mrs. David B. Stevens, Lexington

#### Ex Officio Members

George P. Archer, M.D., Prestonsburg  
Harold B. Barton, M.D., Corbin  
Hoyt D. Gardner, M.D., Louisville  
John C. Quertermous, M.D., Murray

### KAFP To Hold Seminar January 17-18

The Annual Northern Kentucky Seminar of the Kentucky Academy of Family Physicians will be held January 17-18 at the Rowntowner Motor Inn, Fort Mitchell.

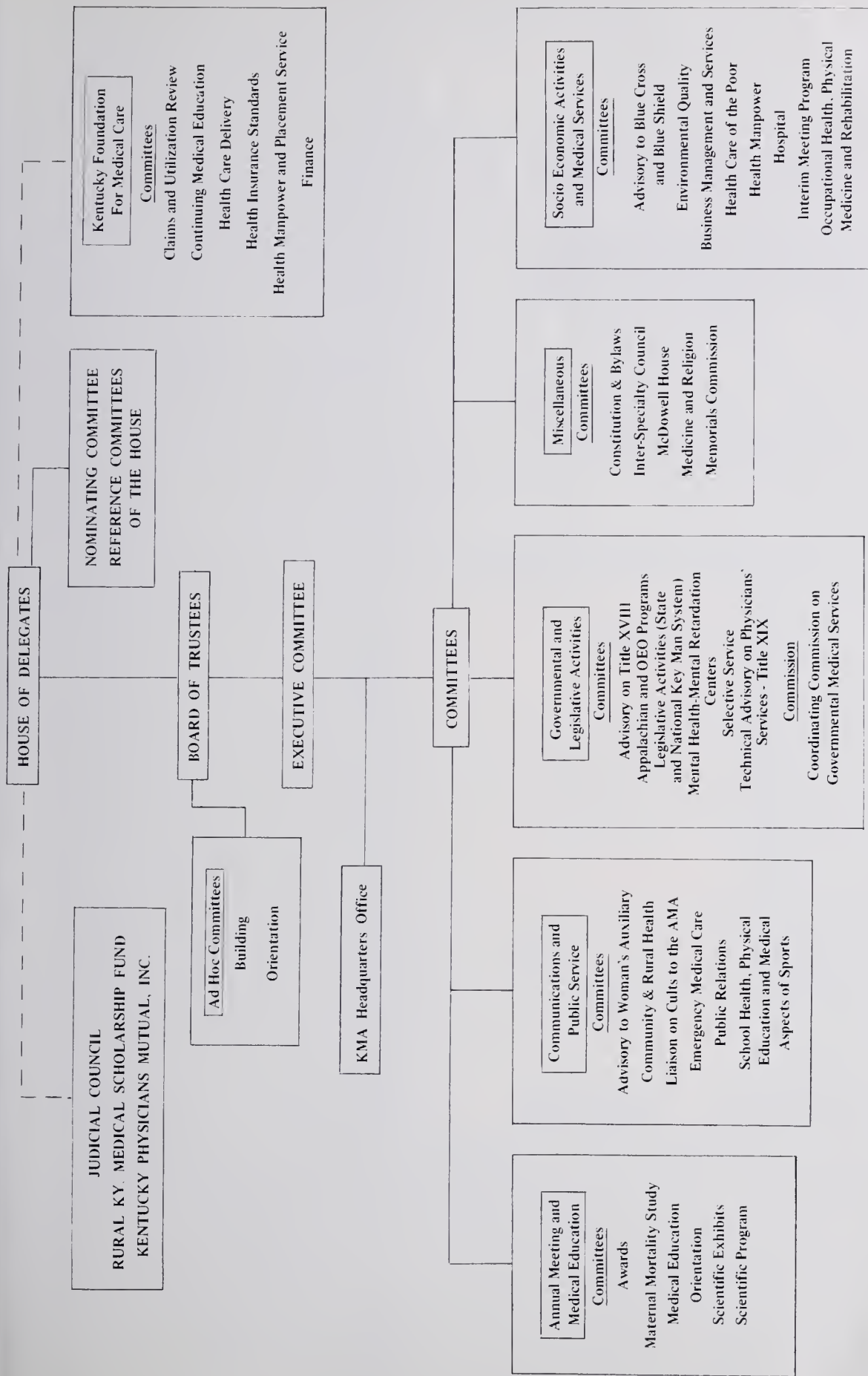
"Infectious Diseases" will be this year's theme for the two-day event, which will include discussions on bacterial meningitis and pneumonias, tuberculosis, venereal disease and viral respiratory disease.

### Blue Shield Names Dr. Stacy Director Emeritus of Board

At the annual meeting of the Board of Directors of Kentucky Physicians Mutual, Inc. on November 16, 1972, Wyatt Norvell, M.D., Chairman of the Board and J. Ed McConnell, President, announced the election of Charles B. Stacy, M.D., Pineville, as Director Emeritus.

Doctor Stacy was one of the founders of Kentucky Blue Shield and has served on the Board of Directors since 1949. A Diplomate in Occupational Surgery, Doctor Stacy is a delegate to KMA from Bell County and has served as a member of the Cumberland Valley Comprehensive Health Planning Council and the Hill-Burton Board.





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**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Nonobstructed urinary tract infection (mainly cystitis, pyelitis, pyelonephritis) due to susceptible organisms. **Important Note:** *In vitro* sensitivity tests not always reliable; must be coordinated with bacteriological and clinical response. Add aminobenzoic acid to follow-up culture media. Increasing frequency of resistant organisms limits usefulness of antibacterial agents, especially in chronic and recurrent urinary infections. Maximum safe sulfonamide blood level, 20 mg/100 ml; measure levels as variations may occur.

**Contraindications:** Hypersensitivity to sulfonamide; infants less than 2 months of age; pregnancy at term and during the nursing period.

**Warnings:** Safety in pregnancy not established. Do not use for group A beta-hemolytic streptococcal infections, as sequelae (rheumatic fever, glomerulonephritis) are not prevented. Deaths reported from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias. Sore throat, fever, pallor, purpura or jaundice may be early indication of serious blood disorders. CBC and urinalysis with careful microscopic examination should be performed frequently.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, severe allergy or bronchial asthma. Hemolysis, frequently dose related, may occur in glucose-6-phosphate dehydrogenase-deficient patients. Maintain adequate fluid intake to prevent crystalluria and stone formation.

**Adverse Reactions:** **Blood dyscrasias:** Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia; **Allergic reactions:** Erythema multiforme (Stevens-Johnson syndrome), generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis; **Gastrointestinal reactions:** Nausea, vomiting, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis; **C.N.S. reactions:** Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia; **Miscellaneous reactions:** Drug fever, chills and toxic nephrosis with oliguria and anuria. Periarteritis nodosa and L.E. phenomenon have occurred. Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

**Supplied:** Tablets containing 0.5 Gm sulfisoxazole.



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## 2.

### Generally good tolerance

Because of Gantrisin's high solubility and rapid excretion, therapy is relatively free of adverse reactions serious enough to require discontinuance of the drug (3.1% of 1002 patients in a recent study\*). Even minor reactions are comparatively infrequent, but may include nausea, headache and vomiting. For other possible undesirable reactions, and precautions, please see summary of prescribing information on opposite page.

\*Koch-Weser, J., et al.: Arch. Intern. Med., 128:399, 1971.

For nonobstructed cystitis

begin with

**Gantrisin<sup>®</sup>**  
sulfisoxazole/Roche<sup>®</sup>

Usual adult dosage:

4 to 8 tablets *stat*  
2 to 4 tablets *q.i.d.*





# Pinworm therapy is often a family affair



**Contraindications:** History of hypersensitivity to thiabendazole.

**Warnings:** If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.

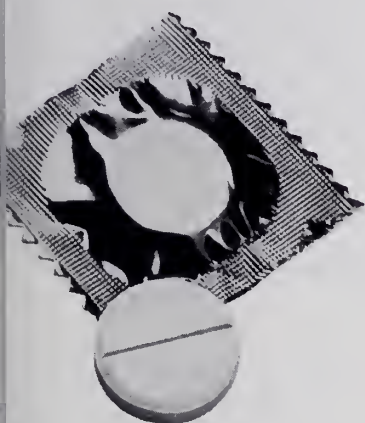
**Precautions:** Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction,

patients should be carefully monitored.

**Adverse Reactions:** Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of live *Ascaris* in the mouth and nose. Hypersensitivity reactions

# A New Dosage Form:

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can keep to the  
regimen you prescribe

include: fever, facial flush, chills, conjunctival injection, angioedema, anaphylaxis, skin rashes, erythema multiforme (including Stevens-Johnson syndrome), and lymphadenopathy.  
Supplied: Chewable tablets, containing 500 mg thiabendazole, in boxes of 36, strip packaged, individually foil wrapped; suspension, containing 500 mg thiabendazole per 5 cc, in bottles of 120 cc.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

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### INDICATION | DOSAGE SCHEDULE

MINTEZOL® (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infections. Dosages are weight related. For your convenience, the information in the weight-dose chart below is included in the full prescribing information and in the 1973 edition of PDR.

*The recommended maximum daily dose of MINTEZOL is 3 g (6 tablets).*

MINTEZOL should be given after meals if possible. Dietary restriction, complementary medications, and cleansing enemas are not needed.

The usual dosage schedule for all conditions is two doses per day. The size of the dose is determined by the patient's weight.

Weight-dose chart:

WEIGHT (lb)	EACH DOSE (g)	TABLETS
25	0.25	1/2
50	0.5	1
75	0.75	1 1/2
100	1.0	2
125	1.25	2 1/2
150 & over	1.5	3

The regimen for each indication follows:

INDICATION	REGIMEN	COMMENTS
Pinworm disease	Two doses per day for 1 day. Repeat in 7 days.  This regimen is designed to reduce the risk of reinfection.	If this is not practical, give 2 doses per day for 2 successive days.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses per day for 2 successive days.	A single dose of 20 mg/lb or 50 mg/kg may be employed as an alternative schedule, but a higher incidence of side effects should be expected.
Creeping eruption	Two doses per day for 2 successive days.	If active lesions are still present 2 days after completion of therapy, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses per day for 2 to 4 successive days according to the response of the patient.	The optimal dosage for the treatment of trichinosis has not been established.

\*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.

**M.D. Needed in Williamstown**

A Family Physician—General Practitioner is needed in Williamstown, Kentucky. Williamstown, with a population of 2,500, is located between Lexington and Covington. It has a 28-bed general hospital for the physician's use. A modern, equipped office building is ready for immediate occupancy. The building, which is 12 years old, is a one-story brick in excellent condition with adequate parking facilities and was built specifically for use by one or two physicians.

*For further information contact:*

*Lenore P. Chipman, M.D.*

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## Sally's back in sew biz! After an arthritic flare-up.

**Note:** This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before beginning treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hematology, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, especially those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage for short-term relief of severe symptoms with the possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Substituting capsules for tablets if dyspeptic symptoms. Patients should discontinue the drug and report immediately any sign of fever, sore throat, oral lesions (such as blood dyscrasia); dyspepsia, epigastric pain, stools of anemia, black or tarry stools or other signs of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial is adequate. Discontinue in the absence of a response. Restrict treatment periods to one week in patients over sixty.

**Contraindications:** Children 14 years or less; senile psychosis or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia; history or presence of drug allergy; blood dyscrasias; renal, hepatic or cardiac dysfunction; hypothyroidism; thyroid disease; systemic edema; and salivary gland enlargement due to the disease. Myalgia rheumatica and temporal arteritis; receiving other potent chemotherapeutic agents; long-term anticoagulant therapy.

**Warnings:** Age, weight, dosage, duration of therapy, extent of concomitant diseases, and concurrent potent therapy affect incidence of toxic reactions. Carefully select and observe the individual patient, especially the elderly (forty years and over) who have decreased susceptibility to the toxicity of the drug. Use with caution in first trimester of pregnancy. Drug may appear in cord blood and milk. Serious, even fatal, blood dyscrasias,

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including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

**Precautions:** The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aged) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

**Adverse Reactions:** This is a potent drug, its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis,

epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with over-dosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia, ulcerative stomatitis, salivary gland enlargement (B)98-146-070-G

**Serious side effects do occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions.**

For complete details, including dosage, please see full prescribing information.

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tated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or over-sedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

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**1973 KMA INTERIM MEETING**

**March 29-30**

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**Reservation Form on Page 104**





Everybody experiences psychic tension.



Most people can handle this tension.



Some people develop excessive psychic tension and need your counseling,



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**Indications:** Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anti-convulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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# MESSAGE FROM THE PRESIDENT



**T**HERE has been much said since the advent of Medicare and Medicaid programs about physicians' "refusal" to treat patients covered by these governmental-medical programs.

I was pleased to note that recent figures emanating from the KMAP in the Department of Health do, in fact, point out that a considerable amount of medical care is being provided to Medicaid patients throughout Kentucky at a much lesser fee than the usual, customary and reasonable charges upon which physicians' services are based. As an example, there has been a continuing effort within the Health Department to obtain additional money for the Medicaid program. If Kentucky's physicians were paid by Medicaid for all Medicaid patients on a usual and customary basis, an additional amount of money in excess of ten million dollars would be needed just to defray the cost of those physicians' in-hospital services.

I do, however, want to point out that our prime concern always will be treatment of those who really need medical care. It has been and always will be our duty as Kentucky physicians to do all that we possibly can to improve the health of all the people in this Commonwealth.

We can only hope that in the years to come government at all levels will realize that when they create a massive federal—state health program they must be willing to pay in full for the services that are rendered under that program in a fair and equitable manner just as they do for all other services purchased by government.

*Lee C. Hesse, MD*

# *The Kentucky Foundation for Medical Care*

## Continuing Education—In The Midst of Rapid Change

**T**HE highest and most effective motivation for the physicians' continuing professional education is internal. It is related to pride in one's work, compassion and concern for patients, and a sense of deep responsibility to the profession and colleagues. That kind of motivation is the one most likely to produce effective learning under any situation.

Continuing education for the physician today is particularly complicated by several factors. These include the increasing demands upon his time, not only for patient services but for leadership in community affairs, paper work in relationship to practice, and many organizational commitments having to do with hospital usage and the activities of medical organizations. In addition, there is the constant and unrelenting increase, or change, in the knowledge content of medicine and its procedural skills or methodologies of care. To all of this may be added the overhead cost of operating a practice which goes on whether the physician is present or not. All of these things provide reasonable excuses, but not compelling reasons, for the failure to keep abreast of the developments in one's pertinent field of practice. One simply has to "make the time" or he will eventually come afoul of both his own conscience and that of society.

An increasing effort has been made by university medical centers, community hospital staffs, specialty and medical society organizations to insure that adequate opportunities are available for every physician to participate in some form of continuing education. In addition, there are mechanisms today at many levels for self-assessment forms of examination (growing in popularity) which permits the physician in the quiet of his own office or home at his own designated time, to challenge himself regarding the knowledge he should have. Such a challenge helps the physician to identify his own strengths

and weaknesses and thus chart a more efficient use of any time to be committed to continuing education.

Members of the Medical Education Committee of the KMA and the Foundation for Medical Care have been attending various AMA conferences for educators and state society officers over the last two or three years (see last issue, page 8). It is abundantly clear that the national trend at the professional level is to design systems which will adequately assure every practicing physician continuing educational opportunities that are readily accessible and then to take steps to document what the physician has done with those opportunities. Such documentation may be part of an award mechanism or a step in fulfilling criteria for his continued membership on hospital staffs, medical societies or even the re-registration of his license at appropriate intervals, as is now the case in New Mexico and may occur elsewhere shortly. Many view these steps as a prelude to eventual re-certification at intervals by one's own specialty as a qualification for continued licensure. There is little question among professional leaders that societal demands for such a systematized effort by and for physicians in continuing education is growing. Applications of that demand are likely to arise which will require the satisfaction of minimal continuing education requirements in order for the physician to qualify for various forms of federal medical care payment or other third party payments.

In a carefully designed sample study sponsored by the KMA in early 1972, the results of which will soon be published in the *KMA Journal*, it was shown that in the one year prior to the survey 48% of Kentucky physicians had attended no formal continuing education programs. The comfort in noting that 36% had taken some form of self-assessment examination evaporates in finding that most of that



group came from the other 52% of Kentucky physicians who had attended some formal courses in continuing education during the year. Thus the one method, other than reading, audio-digest tapes, "curbstone" consultation, etc., which the physician who did not, or was unable to, attend courses could have utilized for learning and stimulation had been very little utilized by him. Nearly one-third of Kentucky physicians indicated that there was "no one to care for their practice" during absences, or that continuing education was "scheduled at an inconvenient time" (30%) or that there was "lack of opportunity in their area" (22%) as reasons for not participating in courses of study. The KMA/KFMC is giving some attention to these problems during the year ahead.

The most frequently used method of obtaining continuing education was reported in Kentucky, as it has invariably been elsewhere, to be medical reading. The other methods suitable particularly to the non-attender at courses also rated well up on the list of preferred methods for continuing education for physicians. In the careful student these can be excellent methods, but the time is surely coming when their actual utilization and effectiveness will be challenged by some kind of assessment examination. In this regard it was of interest to learn that 70% of the KMA physicians sampled felt that the KMA should develop a strong self-assessment program. A surprising third felt that verified continuing education should be mandatory for continued re-licensure to practice or membership in the KMA. Forty-five to fifty per cent felt that continuing education should be mandatory for continued hospital staff membership or specialty re-certification. With these kinds of input from both the professional and public scene, the KMA has moved to charge its Medical Education Committee with the responsibility for recommending a continuing education program that would be of assistance to physicians while stimulating them to regularize their performance in continuing education and to document it. In response to that charge the Committee recently made the following recommendation to the Board of Directors of the Foundation:

"The Medical Education Committee asserts that the primary motivation for maintaining the quality of medical care comes from the physician him (her)-

self who desires to provide the best services to his patient.

However, the Committee also recognizes that the principle stated above cannot alone insure the desired degree of participation in maintenance of professional standards.

Therefore, the Medical Education Committee requests endorsement from the KMA-KFMC to recommend methods of (a) setting standards for satisfying the requirements for continued professional quality, and (b) providing disadvantages (penalties for non-participation in the program."

In preparing a program and developing recommendations which will be referred for decision by the Board of Directors of the Foundation, Board of Trustees of KMA, and the KMA House of Delegates, the Committee is studying all available information, including the experience of other societies, as part of an effort to develop recommendations in the following areas:

(1) The establishment by the KMA of an accreditation system within the state for community hospitals or other clinical entities as regional continuing education centers. The purpose of such a system is to provide education opportunities of short but frequent duration readily accessible to all Kentucky physicians, at which they could acquire accredited hours of study. The university medical centers and the largest teaching hospitals do or may get their accreditation, because of their regional attraction of physicians, from the AMA.

(2) A definition of the minimal continuing education criteria which a physician should meet over a reasonably specified period, such as three years, in order to achieve qualification for some mutually acceptable goal. Such goals have been defined elsewhere as the authorizing of an award, retention of hospital staff or medical society membership, or the re-registration of the license. It is likely that everyone in time will find such a system in some part mandatory for re-certification by his own specialty. Possibly, when that time arrives, re-certification will then become the criterion for re-registration of the license to practice.

(3) Relating the quality of care delivered to the design of a statewide system, under the administrative direction of the KMA/KFMC, of the Professional Standards Review Organization (PSRO) called for in the H.R.1 legislation of last year. It is the belief of the committee that this system should be primarily oriented toward educational need. Statistical data from such a system could be used to determine on a group, rather than an individual, basis where education deficiencies or needs exist so that educational efforts can be targeted.

The physician is caught in a dilemma. Should he respond to the limit of his endurance to increasing demands for his services or should he

limit such commitments sufficiently to allow reasonable time for family life and educational growth? If he is to continue to perform **effectively** as a physician, there seems no way to escape the latter alternative, at some point. It is the objective of the Committee and the KMA/KFMC to provide, with the resources available to us in Kentucky, a system which will assure optimum possible educational opportunities for physicians, document their participation and retain control and direction of the system within professional hands.

FRANK R. LEMON, M.D., CHAIRMAN  
MEDICAL EDUCATION COMMITTEE

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## ANSWERS TO YOUR QUESTIONS ABOUT BLUE SHIELD

### Kentucky Utilization Program

What is the Kentucky Utilization Program (KUP)?

*KUP is a data-gathering and reporting system for institutional services sponsored by Blue Cross and Blue Shield in Kentucky. It follows the format of the Hospital Utilization Project of Pennsylvania.*

What reports are generated by the Kentucky Utilization Program?

*KUP reports take the form of:*

- 1. Automated monthly listings and semi-annual disease, operation and physician indexes for medical audit, research, planning and professional study purposes.*
- 2. Periodic comparative length-of-stay reports in major diagnostic categories.*
- 3. Easy to understand profiles produced periodically for each hospital, indicating major diagnoses worthy of Utilization Review Committee attention.*
- 4. Diagnostic criteria and worksheets for meaningful individual case review.*
- 5. Detailed analysis, on request, of cases reviewed by a Utilization Review Committee.*
- 6. A library of special reports on various aspects of hospital use, which can be adapted to specific information needs—special unit activity, disease incidence, admission patterns, consultation patterns, etc.*

*In addition to producing the reports, Kentucky Utilization Program personnel are available to assist the administration, medical records department, medical staff and Utilization Review Committee of participating hospitals in all phases, including analysis of Kentucky Utilization Program reports.*

Have Kentucky providers been made aware of this program and the benefits and services it provides?

*Yes, the 1971 House of Delegates of the Kentucky Medical Association approved the concept of the Kentucky Utilization Program. This Program was also approved by the Board of Trustees of the Kentucky Hospital Association in October 1971.*

What type of input should participating hospitals provide?

*The appropriate hospital personnel will prepare a discharge abstract for each patient discharged from the hospital reflecting the patient's length of stay, diagnosis, payment status and other pertinent information.*

What type of quality controls are utilized by the Kentucky Utilization Program?

*The participating hospital submits all diagnoses and procedures using ICDA-8 coding and standard medical terminology. On receipt of the abstracts from the hospital, the KUP Staff manually checks each abstract for accuracy and completeness. Completed reports are again manually screened before being presented to the hospital by the KUP representative.*

Why was the Kentucky Utilization Program chosen instead of other data-gathering systems?

*A study was made of several data-gathering systems, and KUP was found to have the following qualities:*

- 1. Its reporting format is comparatively simple.*
- 2. It has been tried and tested and is effective.*
- 3. It is economical.*
- 4. It is flexible.*
- 5. Confidentiality is maintained and guaranteed.*
- 6. It provides exception reporting. KUP provided all of these qualities.*

Do the computerized reports from the Kentucky Utilization Program meet the requirements of the Joint Commission on Accreditation of Hospitals?

*Yes, the reports generated meet the requirements of the Joint Commission on Accreditation of Hospitals, Medicare and Medicaid. KUP can reduce the amount of time spent in manual record keeping.*

How many hospitals participate in KUP?

*KUP is voluntary and at present approximately 25 hospitals are participating. Blue Cross and KUP personnel are working toward enrolling a total of 80 hospitals on the Program prior to the end of 1973.*

How do we get more information regarding the Kentucky Utilization Program.

*If more detailed information regarding KUP is needed, please contact the Professional Relations Division, Blue Cross Hospital Plan, Inc., 3101 Bardstown Road, Louisville, Kentucky 40205.*



---

*From the files of the*  
**COMMITTEE FOR THE**  
**STUDY OF MATERNAL MORTALITY**

---

**T**HIS 36-year-old married, white gravida 7, para 6, had no prenatal care with this pregnancy. Her last menstrual period was October 24, 1969, therefore the EDC was July 31, 1970. She had six living children with no previous obstetrical problem.

She was admitted to the hospital at 10:15 p.m., August 14, 1970, having contractions every 5 minutes; this labor had begun about four hours previously. Her membranes ruptured at home. Physical examination revealed the patient well developed, rather obese, BP was 130/80, pulse 100, FHT good in the RLQ, vaginal examination revealed the cervix 2 cm. dilated; the vertex wasn't palpable.

The contractions every two or three minutes lasted 45-50 seconds at 11:15 p.m. She was completely dilated at midnight and was taken to the delivery room, anesthetized with Trilene by mask. She delivered an 8 lb 2 oz male spontaneously at 12:10 a.m. from the LOA position. The baby cried after the thick meconium stained mucus was aspirated. The placenta was expelled intact at 12:15. Blood loss estimated 200-225 cc. She complained of pain in her right side. The fundus was firm when it was massaged. A bleeder was sutured. Her BP was 126/80. She was nauseated and vomited. She received 10 mg Compazine. She was returned to bed in satisfactory condition. At 1:35 a.m. she had sudden heavy vaginal bleeding; 1000 D5W with 1 cc Pitocin was started intravenously. She received 50 mg Demerol for pain in the right lower quadrant. Her BP had dropped to 70/40. Her physician was present and started 6% Dextran intravenously. A vaginal pack was inserted, 10 minutes later it was saturated. A general surgeon consult was called. Hemoglobin obtained when she was typed and crossmatched was 5.5 mg. Solu-Cortef, 100 mg, was given at 3:05 a.m., 500 cc whole blood was rapidly administered. Patient was still complaining of severe pain in her right lower quad-

rant and was given 75 mg Demerol for the pain. Her color was poor, her skin cold and clammy. Her respiratory distress became worse. The second 500 cc of blood was given followed by 1 gm Fibrinogen at 5:30 a.m. Caffeine NA Benzoate 2 cc was given plus Adrenalin 1:1000, 1 cc into the heart but she expired at 5:55 a.m. with the blood and Fibrinogen still running.

An autopsy was obtained. The peritoneal cavity was opened and grossly the structures appeared normal except the uterus was enlarged and edematous as were the broad ligaments and the peritoneum. The ovaries and tubes were normal. There were a few small lacerations of the cervix, but not enough to account for the excessive bleeding. The cervix was patulous. There was a considerable amount of blood and clots in the vagina plus the sponges and gauze packs which had been placed there previously. There were no lacerations of the vagina.

The lungs on gross examination were white and didn't show any signs of coal dust or congestion. A biopsy was taken from the lower lobe of each lung. The microscopic report revealed no pathologic change on sections of the heart. The lungs showed a few pigment laden macrophages in the alveoli. The intracellular capillaries were devoid of red blood cells. The final diagnosis was term pregnancy, complicated by postpartum hemorrhage.

#### **Comment**

This case was classified by the Committee on Maternal Mortality as a direct obstetric death with preventable factors. The management of this case in the postpartum period was severely criticized. This high risk pregnancy should have had an intravenous running through labor and delivery as well as postpartum. The uterine atony could have been vigorously treated with oxytocics at delivery.

### Maternal Mortality Page

Likewise, at the time bleeding continued she should have been taken back to the delivery or operating room, and under anesthesia or suitable analgesia had an examination of the vagina, cervix and uterine exploration, as well as examination of the parametrial structures.

The autopsy ruled out strongly suspected ruptured uterus with a hematoma. However, the Committee felt that the other lifesaving measures such as anti-flexing the uterus with vigorous massage and suturing of the cervical lacerations should have been carried out. The vaginal pack was condemned. This case again indicates that there is ample time when hemorrhage occurs to rescue the patient. Valuable hours were lost when it would have been possible to save her from death.

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#### FEBRUARY

- 11-17 Third Family Medicine Review, Frank R. Lemon, M.D., Program Chairman, University of Kentucky Medical Center, Registration Fee: \$175. AAFP credit has been requested for 42 hours. Contact Doctor Lemon for further information.
- 21 Jewish Hospital Medical Lecture Series, "Multiphasic Testing," Robert S. Howell, M.D., University of Louisville, Jewish Hospital, Louisville

#### MARCH

- 2-3 Spring meeting, Kentucky Academy, College of Surgeons, Galt House, Louisville
- 21 Jewish Hospital Medical Lecture Series, "Cushing Syndrome," David Orth, M.D., Vanderbilt, Jewish Hospital, Louisville
- 15-17 Conference on Pregnancy Complications, University of Kentucky Medical Center\*. Program Chairman: John L. Duhring, M.D. Registration fee: \$75.00. 13 hours AAFP credit has been requested, Lexington
- 21-22 Nineteenth Annual Symposium on Cardiovascular Diseases, Stouffer's Louisville Inn, Louisville. (See page 133 for details)
- 29-30 KMA INTERIM MEETING, Lake Barkley Lodge, Cadiz

#### APRIL

- 5 Eighteenth Annual Lexington Clinical Conference, "Clinical Problems in Gastroenterology," Lexington Clinic, 1221 South Broadway, Lexington
- 11 Postgraduate course, "Is It Necessary to Treat Hypertension," by Ray W. Gifford, M.D., Cleveland Clinic, Jewish Hospital, Louisville
- 12 Spring meeting, Kentucky Chapter, American College of Radiology, Continental Inn, Lexington
- 19-21 Workshop and conference on Pulmonary Thromboembolism, University of Kentucky Medical Center\*. Program chairman: Kazi

*\*For further information regarding conferences and workshops at the University of Kentucky, contact Frank R. Lemon, M.D., Associate Dean for Continuing Education, College of Medicine, University of Kentucky, Lexington, Kentucky 40506.*

Mobin-Uddin, M.D. Registration fee: \$150 (conference) and \$100 (workshop), Lexington

- 19 Ninth Annual Rheumatic Disease Symposium, Health Sciences Center Auditorium, University of Louisville School of Medicine, Louisville
- 30-May 1 Workshop on Cardiac Diagnosis and Treatment, University of Kentucky Medical Center\*. Program Chairman: Borys Surawicz, M.D. Registration fee: \$60. 11 hours AAFP credit requested.

#### MAY

- 2-4 Symposium on Pediatric Radiology, University of Kentucky Medical Center\*, Lexington
- 9-12 Annual Meeting, Kentucky Chapter, American Academy of Family Physicians, Ramada Inn-Bluegrass Convention Center, Louisville

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#### MARCH

- 24-25 Twenty-fifth Annual Joseph and Samuel Freedman Lectures in Diagnostic Radiology, University of Cincinnati, Cincinnati

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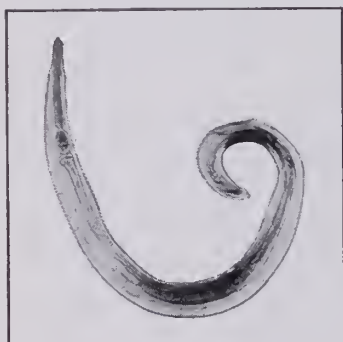


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**Precautions:** Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction,

patients should be carefully monitored.

**Adverse Reactions:** Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis or parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of Ascaris in the mouth and nose. Hypersensitivity reactions

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MINTEZOL should be given after meals if possible. Dietary restriction, complementary medications, and cleansing enemas are not needed.

The usual dosage schedule for all conditions is two doses per day. The size of the dose is determined by the patient's weight.

Weight-dose chart:

WEIGHT (lb)	EACH DOSE (g)	TABLETS
25	0.25	1/2
50	0.5	1
75	0.75	1 1/2
100	1.0	2
125	1.25	2 1/2
150 & over	1.5	3

The regimen for each indication follows:

INDICATION	REGIMEN	COMMENTS
Pinworm disease	Two doses per day for 1 day. Repeat in 7 days.  This regimen is designed to reduce the risk of reinfection.	If this is not practical, give 2 doses per day for 2 successive days.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses per day for 2 successive days.	A single dose of 20 mg/lb or 50 mg/kg may be employed as an alternative schedule, but a higher incidence of side effects should be expected.
Creeping eruption	Two doses per day for 2 successive days.	If active lesions are still present 2 days after completion of therapy, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses per day for 2 to 4 successive days according to the response of the patient.	The optimal dosage for the treatment of trichinosis has not been established.

\*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.





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ISSUED MONTHLY UNDER THE DIRECTION OF THE BOARD OF TRUSTEES

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No. 2

## Laparoscopy for Tubal Ligation and Diagnosis

THOMAS R. WATSON, M.D. AND RICHARD BLAIR, M.D.\*

*Louisville, Kentucky*

*Laparoscopy is a useful adjunct in the diagnosis and treatment of gynecological problems. It is being used increasingly for internal tubal ligation.*

RECENT advances in the technology of fiberoptic light transmission have led to new and useful applications of laparoscopy for both tubal sterilization and the diagnosis of gynecological problems. The value of this procedure is that no extensive abdominal incision is required and convalescence is shortened markedly, most admissions being 24 hours or less, and some tubal procedures being done on an out-patient basis.

Most of the early work with laparoscopy began in the late 1960's, with Steptoe in England and Palmer of France being the foremost advocates. Series of several hundred cases have now demonstrated the very low complication rate and the versatility of the procedure for both sterilization and other gynecologic uses. As subsequently confirmed in the United States, the success rate with a tubal sterilization by laparoscope has, at this stage been comparable with the conventional methods of surgical tubal ligation. Current methods of tubal coagulation that allow removal of segments of Fallopian tube via the laparoscope have made the procedure even more successful while giving definite pathological evidence of tubal interruption.

### Indications

1. *Sterilization.* Fortuitously, the development of this method of sterilization was at a time when there was a marked drop in the number of children per family and a demand by many women for a permanent method of sterilization without side effects, yet one that would require little or no hospital stay.

2. *Gynecologic problems.* Other indications for laparoscopy, in addition to tubal sterilization, are those conditions in which it is necessary to view the pelvic viscera, yet in which laparotomy might be avoided if direct operative intervention is found to be unnecessary. Chronic pelvic pain, endometriosis, possible ectopic pregnancy, questionable adnexal mass, are examples of common gynecologic problems in which visualization via the laparoscope is a great aid in diagnosis and treatment. The additional ability to biopsy certain types of pelvic masses while viewing them is also helpful. Laparoscopy has been advocated by some for the "second look" operation, following gynecologic cancer surgery.

3. *Infertility.* In addition to the above indications, authorities<sup>1</sup> in the field of infertility consider laparoscopic examination of the female pelvic structure extremely helpful before workup is completed. Not only is visualization and possible biopsy of abnormal appearing ovaries advocated, but the ability to inject methylene blue through the cervix while observing the dyes progress, or lack thereof, through the Fallopian tube, can be of immense benefit in determining tubal patency. Frequently, if one or both tubes are occluded, one

\*Clinical Instructors, University of Louisville School of Medicine, Department of Obstetrics and Gynecology, Louisville

can determine the site of occlusion and better judge whether future tubal plastic procedures would be likely to be helpful.

### Instruments Required

Various laparoscopes are now available, ranging from 5 to 10 mm in diameter. All employ a basically similar lens system with fiberoptic bundles running the length of the scope allowing adequate intra-abdominal "cool" light from an external light source. The scope is connected to the light source by a flexible fiberoptic cable about five feet in length.

For distention of the abdomen prior to laparoscopy, a gas, usually CO<sub>2</sub>, is required along with an insufflation machine. These "machines" are available commercially or may be easily constructed from materials obtainable at surgical supply houses. They are so designed to give a controlled gas flow until the abdomen is adequately distended, yet to have a safety valve so a preset intra-abdominal pressure (25 to 35 cm H<sub>2</sub>O) will not be exceeded.

A Verres needle, used to initiate the CO<sub>2</sub> insufflation, has a blunt tip that projects after the abdominal wall is penetrated, thus preventing perforation of intra-abdominal structures with the sharp tip.

An abdominal trocar is used to insert the laparoscope after insufflation.

A most valuable instrument, although not absolutely essential, is the Semm suction tenaculum which when attached to the cervix allows free manipulation of the uterus and adnexae and in addition has a conduit for instillation of dye through the Fallopian tubes.

In addition to the above instruments, a small operating trocar is frequently used along with various probes, biopsy forceps and grasping forceps with electrocoagulation attachment.

### Procedure

The usual preoperative procedure at our hospital is for the patient to be admitted two to three hours before operative time; after blood count and urinalysis, and about one hour prior to surgery, light preoperative medication is given, frequently only atropine gr 1/150. No preoperative prep is required.

General endotracheal anesthesia with a one

half paralyzing dose of anectine has been found to give both adequate anesthesia and relaxation in addition to preventing stomach distention which may occasionally interfere with the procedure.

The patient is placed in semi-lithotomy position with moderate Trendelenburg and both abdominal and vaginal Phisohex preps are done. Following catheterization of the bladder, the Semm tenaculum attached to wall suction is applied to the cervix and both lithotomy and abdominal draping is completed.

Towel clips are then placed in the skin lateral to the umbilicus for elevation of the anterior abdominal wall. The Verres needle is inserted through the inferior umbilical fold and attached to the CO<sub>2</sub> insufflator by vena tubing. By observing the manometer gauge of the insufflator, the experienced operator can readily determine whether the CO<sub>2</sub> flow thru the needle is meeting unusual resistance. Subperitoneal needle insertion may be detected early, thus preventing a common error of insufflation. Carbon dioxide is introduced at .5 to 1 liter/min rate until 25 cm H<sub>2</sub>O pressure is reached. This usually requires 2-3 liters CO<sub>2</sub> depending on patient stature.

After insufflation, a half inch horizontal incision through skin and fascia is made in the infraumbilical fold and the laparoscope trocar inserted. Removal of the stylet is followed by introduction of the laparoscope adjusted to

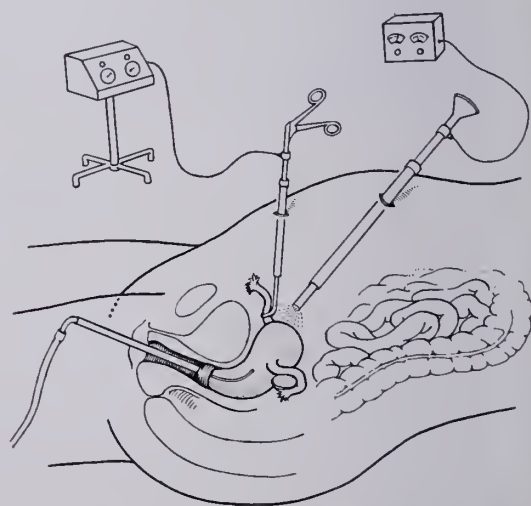


FIG. 1 Schematic drawing showing principle of laparoscopic tubal occlusion with abdomen distended by CO<sub>2</sub> pressure. Biopsy forceps are connected to bovie unit for coagulation before removing segment of tube. Laparoscope connection is to external light source.





FIG. 2 Operator viewing pelvis with patient in semi-lithotomy position. Right hand is manipulating suction tenaculum to move uterine fundus as needed to bring structures into view.

desired light intensity. At this point, one may view the pelvic contents readily, facilitating views of either adnexa and cul de sac by manipulation of the Semm tenaculum. As the tenaculum handle is sterile, the operator may move this with one hand to bring different areas into view. If the findings should indicate, laparotomy may be done immediately on withdrawing the laparoscope and allowing the CO<sub>2</sub> to escape. Repositioning or repeat prep is not necessary.

Should the procedure require biopsies or if tubal sterilization is planned, a second smaller (6-7 mm) operating trocar is inserted into either lower quadrant under visualization with the scope and after transilluminating the abdominal wall to avoid the inferior epigastric artery. Various biopsy or grasping forceps may then be used as needed.

#### Procedure for Tubal Sterilization

Insulated biopsy forceps are inserted via the operating trocar and the previously identified Fallopian tube is grasped lightly about one centimeter from the cornu. A coagulation bovie current is applied for 5-10 seconds with the setting in the 40-50 range. When blanching and slight charring of the area of tube held by the forceps is noted, the forceps are removed. They are applied 1-2 cm distally and coagulation is repeated. The Fallopian tube in the avascular area between the two sites is then removed with one bit of the biopsy forceps and specimen preserved for pathology. The same procedure is repeated on the opposite tube. In the event of bleeding from the biopsy

site, electrocoagulation with the forcep tip may be used for hemostasis.

If the procedure is then completed, the instruments are removed and CO<sub>2</sub> is vented via the trocar sleeve. As CO<sub>2</sub> is readily absorbed by the peritoneum, any residual should be absorbed in 10-15 minutes if all was not removed during the venting. After withdrawal of the trocar sleeves, each incision is closed with one 4-0 silk skin suture and the patient moved to the recovery room.

Overall effectiveness of this relatively new sterilization procedure is difficult to assess without long term follow-up, but preliminary studies indicate a high level of confidence. Pent and Loeffler<sup>2</sup>, in a series of 300 tubal sterilizations over approximately a three-year period, have noted only one failure, occurring in a patient that was most likely pregnant at the time of the procedure. Cohen<sup>3</sup>, reported a series of 50 patients at Michael Reese Hospital in which nine had postoperative hystero-grams and nine had repeat laparoscope two to six months postoperative and in all tubal occlusion was verified. These early findings suggest that laparoscopic tubal sterilization would at least equal the failure rates of one in 300 for the Pomeroy method and one in 70 for the Madlener as reported by Overstreet<sup>4</sup>.

#### Complications

Complications in this procedure are mostly related to overzealous or improper insufflation and malposition of the bovie tip during intra-abdominal coagulation. As mentioned previously, poor positioning of the Verres needle may result in subperitoneal insufflation with subsequent ballooning out of the peritoneum of the anterior abdominal wall or with deeper penetration insufflation of a viscus or vessel is possible. Both should be recognized early with careful technique.

In intra-abdominal use of the bovie coagulation current, care and constant visualization must be maintained to prevent cauterization of bowel or other nearby structures.

In our present series of 136 cases of both laparoscopy and tubal coagulation, only one complication, peritonitis with small bowel perforation was encountered. This occurred two

days after discharge and required laparotomy with closure of the defect.

### Contraindications

Contraindications for laparoscopic sterilizations are similar to more conventional methods of tubal ligation with two important exceptions. Excessively obese patients with heavy, thick abdominal walls are not good candidates due to the increased depth needed to introduce the trocar and scope. We have presently adopted 170 pounds as the cut-off weight for laparoscopic exams.

Secondly, patients who have undergone previous abdominal surgery that might result in dense intraperitoneal adhesions, especially to the anterior abdominal wall, should be approached with caution because of the possibility of perforating bowel. Obviously not all pre-

vious surgery is considered a contraindication, as previous cesarean sections, ovarian cystectomies, cholecystectomies, etc., do not usually present problems.

### Conclusion

Laparoscopy, either for visualization alone or for tubal sterilization, is a most useful procedure. It entails a short hospital stay with a low degree of complications for tubal sterilization and may be used with the clinical examination to possibly forestall open surgical exploration.

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4. Overstreet, E. *Clinics of Ob. & Gyn.* Vol. 7, No. 1, March, 1964.

## Manuscript Memos

*Manuscripts should be submitted in duplicate to The Journal of KMA, an original copy and one carbon, and typed with double spacing. Maximum length of an article should not exceed 4500 words; the Board of Consultants on Scientific Articles prefers that they be briefer than this when possible.*

*In submitting a manuscript, the author is requested to include a concise summary, not to exceed 35 words, to be used as a sub-title when the article is published in The Journal. The purpose of the summary is to create additional interest and encourage greater readership.*

*Footnotes and bibliographies should conform to the style of the Quarterly Cumulative Index Medicus published by the American Medical Association. This requires in the order given name of author, title of article, name of periodical, with volume, page, month—day of month if weekly—and year. The Journal of the KMA does not assume responsibility for the accuracy of references used with scientific articles.*

*All scientific material appearing in The Journal is reviewed by the Board of Consultants on Scientific Articles. The editors may use up to six illustrations with the essayist bearing the cost of all over three one-column halftones.*

*Arrangements for reprints of an article should be made directly with the publisher of The Journal, Gibbs-Inman Printing Company, 817 W. Market St., Louisville, Ky.*

*The bylaws of the Kentucky Medical Association provide that all scientific discussions and papers read before the KMA Annual Meeting shall be referred to the KMA Journal for consideration for publication. The bylaws further state that the editor or the associate editor may accept or reject these papers as it appears advisable and return them to the author if not considered suitable for publication.*

*Please mail your scientific articles to The Journal of the Kentucky Medical Association, 3532 Ephraim McDowell Drive, Louisville, Kentucky 40205.*

# Cutaneous Xanthomatoses†

ROBERT R. KIERLAND, M.D.\*

Rochester, Minnesota

*The cutaneous xanthomatoses can be classified into three main groups: localized, normolipemic and hyperlipemic. Treatment for these skin conditions is frequently unsatisfactory.*

**T**he cutaneous xanthomatoses can be classified into (1) localized conditions not associated (or rarely so) with systemic manifestations; (2) reactions of the skin, with normal lipid values and systemic findings, and (3) reactions of the skin with hypercholesterolemia or hyperlipemia (or both). This classification does not correlate with the serum classification of Fredrickson because he does not include localized xanthomatous lesions or skin reactions with normal serum lipid levels. The present grouping is a modification of that given in the latest Andrews' text.<sup>1</sup>

**Localized Xanthomatoses. Xanthogranuloma**—This condition formerly known as nevooxantho-endothelioma of McDonough is characterized by localized yellowish to yellow-red solitary or multiple nodules studded on the skin of an infant or child (FIG. 1). The microscopic findings are usually distinctive, and the condition is benign. The lesions usually gradually fade over a period of a few years. Rarely, these lesions may involve viscera and eyes.

**Solitary Giant Xanthoma**—The solitary giant xanthoma probably is a variant of the xanthogranuloma, but is larger and more yellow. Eventually, it also disappears spontaneously.

**Xanthelasma**—These oval-to-linear lesions involve the eyelids, more frequently the upper (FIG. 2). This is the most common type in adults and appears as soft chamois-like plaques. Approximately 40% of patients with these have systemic hyperlipemia that warrants laboratory

examinations of serum cholesterol and triglycerides (Table 1).



FIG. 1. Xanthogranuloma.

**Normolipemic Xanthomatoses**—These lesions result from lipid depositing in areas of reticuloendothelial proliferation.

**Xanthoma Dissemination**—This condition is characterized by large patches of small xanthomatous papules appearing mainly in the intertriginous and flexural folds (FIG. 3). The oral pharynx and laryngeal mucosal surfaces often are involved. The laryngeal involvement may be so severe that tracheostomy is necessary. About 40% of these patients have diabetes insipidus. The lesion usually appears in young adult males and persists indefinitely.

**Generalized Xanthelasma or Plane Xanthoma**—Clinically, the appearance is that of ordinary xanthelasma, but the individual plaques are much larger and more widely spread over the face, neck and upper torso (FIG. 4). Less frequently, other areas are involved. Usually, the hue is fainter and less vivid than in other xanthomata. This condition may be confused with other diffuse xanthomatoses so an evaluation of the serum lipids is mandatory.

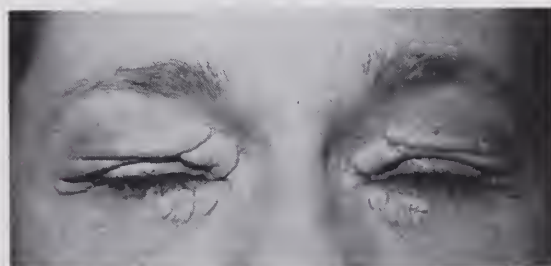


FIG. 2. Xanthelasma.

†Read during the KMA Annual Meeting, September 21, 1972, Louisville

\*Senior consultant, Department of Dermatology, Mayo Clinic; Professor of Dermatology and Syphilology, Mayo Graduate School of Medicine, Rochester



Table 1

Classification of Hyperlipoproteinemia

Type	Lipoprotein*	Plasma lipid	
		Cholesterol	Triglyceride
I	Chylomicron	Normal or slightly increased	Much increased
II	Beta	Much increased	Normal or slightly increased
III	Beta and pre- $\beta$	Moderately increased	Moderately increased
IV	Pre- $\beta$	Normal or slightly increased	Much increased
V	Chylomicron, pre- $\beta$	Slightly increased	Moderately increased

\*Chylomicron, 80% triglyceride; pre- $\beta$  50% triglyceride and 20% cholesterol; and beta, 47% cholesterol and 9% triglyceride.

Lynch and Winkelmann<sup>4</sup> found this associated with the lymphomas, leukemia and multiple myeloma.

**Hyperlipemic Xanthomatoses (Familial Hyperlipoproteinemia)**—Tables 1 and 2 list the distinctive features of the Fredrickson classification, the manifestations of xanthomas accompanying each type, certain synonyms and the genetic implications.

Xanthoma tuberosum is characterized by large nodular tubers usually located over joints, especially the knees and elbows (FIG. 5). Early lesions are yellow or orange, but later the lesions may become fibrotic.

Eruptive xanthomas are small yellow papules with an erythematous halo that appears abruptly. Frequently the lesions are grouped (FIG. 6), the sites of predilection being the body

folds, flexor surfaces of extremities and buttocks.

Xanthomas of tendon sheaths are small papules or nodules involving tendon sheaths, usually the tendo Achillis.

Xanthomas of palmar creases are linear yellow streaks confined to the palmar folds.

**Secondary Hyperlipoproteinemia. Hypercholesterolemia**—This condition is common in biliary cirrhosis but also may be associated with diabetes mellitus, hypopituitarism, hyperthyroidism and nephrotic syndrome.

**Hypertriglyceridemia**—The most common forms are not familial hyperlipemias but are secondary to other disorders. Some patients also have hypercholesterolemia. Examples are myxedema, nephrosis, severe uncontrolled diabetes mellitus and acute alcoholism. Any of



FIG. 3. Xanthoma disseminatum.



FIG. 4. Plane xanthoma.



FIG. 5. Xanthoma tuberosum.



FIG. 6. Eruptive xanthoma.

the familial hyperlipoproteinemias may be mimicked.

**Miscellaneous**—Although not xanthomatoses in the strict sense, many localized and widespread cutaneous lesions may contain enough lipid to make diagnosis difficult both clinically and histologically; some examples are the various lesions of histiocytosis X, dermatofibromas, necrobiosis lipoidica diabetorum, Niemann-Pick disease, lipid proteinosis and other lipidoses. Also, localized xanthomas may arise at sites of trauma and infection.

Table 2

## Cutaneous Xanthomas in Familial Hyperlipoproteinemia

Type I (autosomal recessive)—
Exogenous hypertriglyceridemia, hyperchylomicronemia
Eruptive xanthoma
Bürger-Grütz syndrome
Type II (autosomal dominant)—
Familial hypercholesterolemia
Xanthoma of tendon sheaths
Xanthelasma of lids
Xanthoma of palmar creases
Xanthoma tuberosum
Type III (autosomal recessive)—
Broad beta disease
Xanthoma of palmar creases*
Xanthoma tuberosum
Eruptive xanthoma
Type IV (? autosomal dominant)—
Endogenous hypertriglyceridemia, "CHO induced" lipemia
Eruptive xanthoma†
Xanthoma of palmar creases†
Xanthoma tuberosum
Xanthelasma of lid
Type V (? genetic variant of type IV)—
Mixed hypertriglyceridemia, mixed lipemia
Eruptive xanthoma

\*Fredrickson and Levy<sup>3</sup> considered it distinctive in type III.

†Polano and associates<sup>6</sup> considered it characteristic in type IV.

## Treatment

Treatment is frequently unsatisfactory, and in secondary hyperlipoproteinemia is directed to the basic cause. A low-fat diet is essential in all patients with familial hyperlipoproteinemia. A diet composed of unsaturated fats and low in cholesterol as well as the use of nicotinic acid, cholestyramine, or *D*-thyroxine is indicated in patients with cutaneous xanthomas of type II.

In lesions of types III, IV and V, loss of weight is essential, and the use of clofibrate frequently helpful.

Troublesome lesions of xanthelasma, xanthoma of tendon sheaths and xanthoma tuberosum may be excised. Some lesions of xanthelasma are amenable to treatment with trichloroacetic acid.

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# Malignant Melanoma: A Case Report†

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*A 56-year-old Caucasian male presented with melanoma metastatic to the liver and ascites. Response to triple cytotoxic chemotherapy with Vincristine, Actinomycin-D and Procarbazine was rapid. Immune factors are discussed.*

**S**URVIVAL in metastatic malignant melanoma is dismal despite current approaches with combination chemotherapy and immunotherapy. The following case report demonstrates response to conventional agents with due consideration given to immunologic parameters.

## Case Report

A 56-year-old Caucasian male presented in June, 1972, with a one month history of malaise, anorexia, weight loss and increased abdominal girth. Eight months prior to admission he had resection and radical axillary dissection for a malignant melanoma of his right deltoid area; axillary nodes then were palpable. Histologic studies at that time demonstrated a melanoma with nests of cells growing just below the epidermis and associated lymphocytic infiltration. Involved axillary nodes showed hyperplastic lymphocytes surrounding the tumor. Uninvolved axillary nodes showed hyperplastic lymphocytes and active germinal centers. From the time of initial surgery the patient had been followed at three month intervals without evidence of recurrence until the present admission.

Physical Exam: Vital signs were stable. A cachectic Caucasian male is seen with evidence of surgical excision in right deltoid area and scarred right axilla. There are no palpable nodes. Lungs—clear. Heart—no abnormalities. The abdomen was visibly distended with a fluid wave. Liver edge was palpated down 9-½ cm in the right parasternal area, 10 cm

subxyphoid, 7 cm left parasternal with a nodular configuration.

Lab: Hemoglobin 15.5; WBC 8,100; platelets 381,000; SGOT 749; Bilirubin 2.8; Alkaline Phosphatase 325 International Units; Albumin 2.45. Skin: Reactivity was not tested because of patient's debilitated state. Chest x-ray—normal. Liver scan—(FIG. 1) consistent with an infiltrating neoplasm. Liver biopsy—metastatic melanoma. Paracentesis—bloody, no tumor cells.

Prognosis and side effects were explained to the patient and with his consent the following course of therapy was initiated with repeat courses after four-week rest intervals (Table 1).

Hematopoietic toxicity manifested by a nadir in WBC of 2,100 occurred 14 days after initiation of the first course of therapy. Platelets were depressed maximally at the same time to approximately 100,000. Three days past the nadir, all counts had recovered to normal range. Systemic symptoms consisted of myalgia and stomatitis which progressed from the eighth day and lasted eight to ten days. They responded to aspirin and viscous Xylocaine respectively.

A dermatitis consisting of brown macular patches of the face, forehead and shoulders was noted on the third day and subsided by the end of the seventh day. On approximately the eighth day marked nausea and vomiting appeared. This lasted six days and required hospitalization, with IV supplementation and phenothiazine anti-nausea medication. A mild distal, digital paresthesia was noted approximately 10 days after onset of therapy, and has continued to the present time.

Two weeks after initiation of therapy, the liver felt softer and objectively smaller. Five weeks afterwards, prior to initiation of another cycle of therapy the patient had a liver edge that was a maximum of 2 cm down at the right parasternal area only. The patient was ambulating and had regained his appetite; ascites regressed.

†Emanates from St. Joseph's Infirmary, Louisville





FIG. I. Liver scan before therapy.

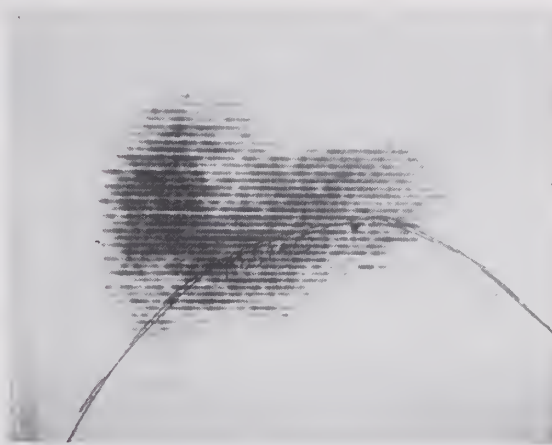


FIG. II. Liver scan five weeks from initiation of therapy.

The lab data then was as follows: Bilirubin—0.55; SGOT—32; Alkaline phosphatase—109; (normal range) Hemoglobin—11.5; WBC—7,100; platelets—240,000; cholesterol—207. Liver scan five weeks from initiation of therapy showed dramatic diminution in the degree of infiltration. (FIG. II). Skin tests for Mumps/PPD on sixth week since start of program showed: mumps(12 mm. at 72 hours) PPD(10 mm. at 72 hours).

Toxicity after subsequent therapy was quite minimal and consisted of nausea only after the first day of therapy, as well as tolerable digital paresthesia.

### Discussion

Malignant melanoma of the skin, comprising one to three percent of all malignancies, occurs most often between the ages of 40 and 70 with equal frequency among both sexes. Prognosis has been surveyed relative to staging and an increase noted in five-year survival of from 70% to approximately 80% when prophylactic lymph node dissection is done in clinical stage I (Localized)<sup>2</sup> disease; this contrasts with a 39% five-year figure in Stage II (Involved nodes)<sup>2</sup>. A different staging system cited by Luce<sup>6</sup> again emphasizes stage rather than histology in prognosis. An excellent review by Mihm et al<sup>3</sup> categorizes the disease in distinct clinicopathologic forms and correlates survival with level of invasion of the primary.

Drug response with single agents has been quoted in the range of 10-15% with two to four month periods of duration<sup>4</sup>. In their article Cohen et al<sup>4</sup> review the experience of

other investigators who utilized combination chemotherapy; rates of response varied from 12 to 50%. In their own series of 16 patients, a combination a Bis-Chlorethyl-nitroso-urea, Vincristine and Imidazole Carboxamide yielded a 62% overall response rate. However, only two patients obtained complete responses of 9 and 14 months. No patient with hepatic disease responded.

Combination therapy was selected using agents that singly have activity against melanoma, yet act by different modes in order to attack multiple sites in cellular metabolic pathways. This approach limits toxicity as seen when a single drug is used to tolerance.

Procarbazine is a methyl-hydrazine derivative which may act through *in vivo* liberation of several components that alkylate and oxidize cellular components. It may also have a selective effect on the methylation of transfer RNA<sup>5</sup>. Activity against melanoma has been quoted at 28%; this agent is a MAO inhibitor, and the usual precautions against this class of agent should be exercised. Vincristine, a Vinca alkaloid, induces metaphase arrest via binding with spindle tubules<sup>5</sup> and it also interferes with Uridine incorporation into soluble RNA<sup>4</sup>. A 20% response rate has been quoted.

The antibiotic—Actinomycin-D forms a stable complex with DNA thus inhibiting DNA dependent RNA synthesis, especially Ribosomal RNA<sup>5</sup>. Response rates of 17%<sup>6</sup> and 33%<sup>7</sup> have been reported.

Toxicity in the present case was acceptable in view of the ultimate prognosis. Despite the moderate discomfort of the first course of

medication, during subsequent therapy hematologic and systemic toxicity was minimal. Mild nausea was noted only on the first day of medication and no further myalgia or stomatitis was encountered.

A positive favorable correlation has been reported when cellular lymphocytic infiltration<sup>8, 14</sup> of the primary lesion exists, and in the present case this was noted on review of the slides. Effective chemotherapy may reduce the tumor burden to a level within the patient's immune competence, this then may allow for continued maintained regression. Fass et al<sup>9</sup> found the presence of delayed cutaneous hypersensitivity to autologous tumor cells in localized disease. Jehn et al<sup>11</sup> furthermore characterized a beta globulin fraction mitogenic for lymphocytes in patients with melanoma.

Humoral as well as cellular immunity has been demonstrated to operate in melanoma<sup>8</sup> and the progression of disease has been seen with a simultaneous decrease in tumor specific antibody titre<sup>10</sup>. Although serum antibody was not measured in this case, the cutaneous reactivity of our patient speaks for cellular immunity that may maintain remission.

Numerous approaches to immunotherapy have been studied utilizing these principles<sup>12-14</sup>. A problem that arises, however, is the induction of "Blocking antibodies"<sup>15</sup> that lead to the phenomenon of "enhancement" and subsequent tumor progression. Morton et al<sup>16</sup> commenting on a decreasing titre of immunofluorescent and complement fixing antibody with progressing disease, suggested that active immunotherapy be used for localized disease in an immune competent individual. An extension of this reasoning is to use immunotherapy at the other end of the spectrum, i.e. the individual who has had maximum

reduction in tumor mass by chemotherapy, surgery or radiation.

Maintenance therapy may be in the form of active or adaptive immunotherapy. In those patients who initially demonstrated anergy and then regained it, monitoring may be conducted by periodic skin testing to detect any loss of skin sensitivity.

Further studies are needed, correlating histology, immune reactivity and the optimum sequential or combined use in melanoma patients of chemotherapy and immunotherapy.

I would like to thank John Hemmer, M.D., for referral of the patient, who as of January 26, 1973, is free of disease.

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Table 1

DAY.	1	2	3	4	5	4 week rest
Vincristine (IV)	2mg.				2mg.	interval
Actinomycin-D (IV)	0.5 mg. daily x 5					Recycle
Procarbazine (P.O.)	100 mg. P.O. daily x 5					
Vincristine	—		Eli Lilly & Co.		—	Indianapolis, Ind.
Actinomycin-D	—		M.S.D.-Merck Co.		—	West Point, Pa.
Procarbazine	—		Hoffman-La Roche		—	Nutley, N.J.



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# Medical Progress

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## Female Sexual Sterilization

WALTER M. WOLFE, M.D.\*

Over the past decade public interest and concern for population control, reproductive health and not the least the women's liberation movement have created a climate for considerable change in attitudes toward the medical control of reproductive functions. To most physicians contraception is now an accepted fact of comprehensive health care of women in the childbearing age. Similarly, several factors have emerged which have profoundly changed our consideration of surgical methods of contraception, *i.e.* sterilization. There seems to be a widespread feeling of uneasiness on the part of both patients and physicians regarding the effects of long term oral contraception. The variable effectiveness of other methods of contraception are of great concern to patients who believe that absolute control over fertility is a right. In contradistinction to the post World War II family the "nuclear family" of the seventies seems to wish to limit their family size to no more than two to three children. Refinement of surgical techniques have brought a strong current of change in the attitudes of patients and some physicians toward surgical sterilization.

In the past, sterilization was offered only as a last resort when pregnancy was considered a clear risk to health or life of the patient. Voluntary sterilization was undertaken only under strict regulations which varied from doctor to doctor and hospital to hospital. There was an understandable reluctance on the part of the physicians to perform voluntary sterilization at the whim of the patient but in retrospect this lack of affirmative opinion was indeed a disservice to women. Today, **surgical sterilization is considered a method of contraception**

which may be **chosen when the patient and physician agree that a permanent method is desirable.** When dealing with couples, vasectomy in the male is the much simpler and least expensive procedure and of course avoids the risk of surgical invasion of the peritoneal cavity. However, for a variety of reasons, not germane to this discussion, female sterilization is frequently the procedure of choice.

All of the presently popular methods of female sterilization involve some method of interruption of the continuity of the oviducts bilaterally or removal of the uterus. The accompanying chart outlines the various methods of sterilization and the time in which they are most applicable. Since it is well known that the prenatal period is the most opportune time for discussing family planning with the patient, it becomes obvious that the most opportune time for sterilization is during the puerperum immediately after delivery or within 72 hours of delivery. At Louisville General Hospital patients are offered tubal ligation immediately after delivery and in 70% of the cases before the patient is removed from the delivery room following delivery. The remaining 30% are returned to the delivery room within 72 hours of delivery for their operation. This enables the patient to receive these services in association with the hospitalization for delivery with little or no increase in hospital stay and hospitalization costs. Over 200 patients have been operated on under this policy without appreciable morbidity and no mortality. The procedure is carried out under the anesthesia used for delivery in most cases, augmented with local anesthesia where this is necessary. The incision is made in the lower edge of the umbilicus. Easy access to the tubes is afforded and in the case of the umbilical incision there is a cosmetic result. We have been able to accomplish these

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procedures without additional staff in the delivery room other than a surgical technician assistant during the procedure.

At the time of cesarean section, tubal ligation is obviously simple and easy to perform and produces no additional hazard to the patient. A more controversial method of sterilization is hysterectomy performed at the time of cesarean section. This method is usually reserved for patients who have a high risk of gynecologic disease requiring future surgical intervention, such as uterine fibroids or a suspicious cervical lesion.

**Table 1**

**METHODS OF FEMALE STERILIZATION**

- I. Obstetrical
  - A. Postpartum tubal ligation
    1. Immediate (concurrent with delivery)
    2. Delayed (within 72 hours postpartum)
  - B. Cesarean Section
    1. Tubal ligation
    2. Hysterectomy\*
- II. Interval (interconceptional)
  - A. Tubal Ligation
    1. Abdominal
    2. Vaginal (posterior colpotomy)
    3. Endoscopic procedure\*\*
      - a. Laparoscopy
      - b. Culdoscopy
  - B. Hysterectomy\*
    1. Abdominal
    2. Vaginal (simple hysterectomy only; without repair)

\* Still controversial from the standpoint of operative risk when done solely for sterilization.

\*\* Long term effectiveness still unknown.

During the calendar year 1972, there were over 200 sterilizations performed in the non-pregnant or intraconceptional patients. Approximately one-half of these were tubal interruptions done through various routes and the other half vaginal hysterectomies. It should be obvious that the risk to the patient is increased by the intraconceptional position of the uterus requiring deeper exploration of the abdominal cavity and manipulation of abdominal viscera. The procedure requires longer hospitalization and of course incurs higher operative risks. Several refinements of technique have contributed to a lowering of operative morbidity and shortening hospital stay. These include a small 2-3 cm suprapubic incision with support of the uterus below so that the tubes are delivered into the incision without packing or otherwise handling the abdominal contents. The vaginal posterior colpotomy is probably the simplest and most easily tolerated technique for intraconceptional tubal ligation for those trained in vaginal

surgery. In the past two years, laparoscopy and bilateral tubal fulguration have become popular throughout the country and in Louisville. At the present time, we have done over 100 cases in our combined public and private practice and are at present carrying out a program of outpatient laparoscopy designed to decrease the cost of this operation. Laparoscopy becomes much more attractive to the patient and the physician since this procedure can be performed as an outpatient procedure in many cases or at the very most one or two nights in the hospital and with minimal postoperative discomfort.

In recent years, hysterectomy has been discussed widely as a method of sterilization. It should be clearly understood that the operation discussed is that of simple vaginal hysterectomy without repair and without additional "cosmetic surgery". It would appear that there is little justification for the abdominal route of hysterectomy simply for sterilization unless there is some other identifiable reason for exploring the abdomen. Simple vaginal hysterectomy carries with it a very low morbidity and no mortality and shortens the hospital stay to three or four days. It remains to be seen whether or not hysterectomy with its obviously attendant increase in risk can be justified as an operation simply for sterilization. It should, however, be considered in all patients in whom sterilization is desirable and there is a coexisting high risk of gynecologic disease.

Unfortunately surgical sterilization occasionally results in failure as does any other method of contraception. The failure rate of various methods of sterilization ranges between 0.5 to 2% depending upon the type of operation done, the institution, and the patient population it serves. Even hysterectomy has resulted in tubal pregnancy in a few isolated cases. At present all the surgical methods of tubal interruption performed directly, that is, by the abdominal or vaginal route, carry with them a risk of failure of about one percent.

In the case of the laparoscopic tubal operations, it should be understood that in most cases these operations depend upon fulguration of the tubular epithelium with resultant scar formation interrupting the patency of the tube. In some techniques, segments of the tubes are removed and in all techniques an effort is made to sever the tube. However, at this time, the

long term efficacy of laparoscopic tubal operations is unknown. But at present a relatively small number of reported cases indicates that the failure rate is approximately 0.5% or higher. Nor is the procedure itself without its complications. Nationally there have been at least two deaths reported associated with laparoscopic tubal fulguration and each published series of cases reports a small number of bowel injuries due to burns of the bowel or other injuries to the abdominal viscera during the laparoscopic procedure.

A study of sterilizations done at Louisville General Hospital 1955 through 1968 revealed that during that span the incidence of all sterilizations were 2.1% of live births. Since that time the incidence of sterilization/live births has risen to 9.2% in 1971 and a little more than 10% in 1972. We feel that this rise will level off at about 10% per live births delivered at the General Hospital. Several factors contributed to this rise in sterilization procedures among which were increased staff interest in Family Planning, the liberalization of hospital policies in regard to sexual sterilization and the application of sexual sterilization to younger women. In the earlier series the average age of patients sterilized was 31 years and the average parity was 6. There has been a steady downward decline in both these figures so that the average age is closer to 20 years, many patients being under 20 and the average parity is now 3-4. Since the utilization of the delivery room for surgical sterilizations of puerperal patients the incidence in puerperal tubal ligation has risen sixfold.

One of the most disturbing aspects of sexual sterilization of women seems to involve conflicts and confusion of moral, ethical and legal standards and the risk of the physician to litigation. The opposition of the Roman Catholic church to this procedure has remained unchanged as stated in the Papal Encyclical *Humanae Vitae* and in the recently published rules and regulations for hospitals. There are also non-Catholic religious groups who have definite opposition to sterilization procedures as well. This opposition is of course based on religious ideology and philosophy and does not reflect statutory law. The following excerpts are from an opinion requested from the office of the Attorney General dated March 30, 1972 with the registration OAG

72 219. "Kentucky has no law specifically allowing or prohibiting voluntary sterilization." The word "voluntary" is operational here meaning that the individual must be competent both by age and mental condition to give informed consent for a surgical procedure. Minors or mentally incompetent patients cannot be treated without specific permissions obtained from other parties. In the view of the law the minor individual and the mentally incompetent individual are considered incapable of giving their consent to anything of legal consequence.

The request for the attorney general's opinion was initiated by the Interagency Committee on Permissive Sterilization chaired by Miss Elizabeth M. Cosby of the Division of Maternal and Child Health of the State Department of Health asking two questions. The first involved the consent for voluntary sterilization from individuals falling into the following categories: a) a single mentally incompetent minor; b) a single mentally incompetent adult; c) a married mentally incompetent minor living with his or her spouse. In all three of these categories it was the opinion of the attorney general's office that the permission come from the circuit court upon petition by the committee. In this regard the committee would probably be one or both of the parents or the spouse of the individual who has previously been declared incompetent to usual court action. The opinion further states "it is our opinion that it must be shown the results will be of a definite benefit to the incompetent."

The second part of the inquiry asked who may give consent for sterilization in the following categories: a) a married, mentally competent adult living with her spouse; b) a married, mentally competent minor living with her spouse; c) a mentally competent adult who is 1) single 2) divorced 3) separated 4) deserted in marriage. The opinion states "a mentally competent single adult may consent to anything to which is within the contemplation of the law. One who is divorced from marriage may consent to sterilization in the same way as one who is single". The opinion states emphatically that in the case of a mentally competent adult living with his or her spouse that the agreement and permission of the spouse must be obtained. Further, "it



is our opinion that a nonconsenting spouse has an inchoate parental right, that is to say, a life or property right to have children. . . . The destruction of this right by a doctor in performing sterilization surgery upon one's spouse might give rise to a cause of action against him, even though the other spouse validly consented. As a matter of fact, since this right belongs exclusively to the nonconsenting spouse, it would make no difference that the sterilized spouse consented. The question for a court to decide would resolve itself to whether the patient could contract away a right belonging to his or her spouse absent his or her concurrence. To date we find a paucity of law on this particular problem."

The opinion goes on to cite North Carolina and Virginia laws both of which require consent of the other spouse before sterilization surgery can follow and a California case which suggests that the consent of the sterilized individual would insulate the performing physician from any liability in failing to notify the other spouse in order to obtain his consent. However, the opinion states emphatically "it is our opinion that a physician should refrain from sterilizing a spouse without first obtaining the other spouse's consent or, where he or she objects, unless it is shown that it is necessary to save his or her life or prevent substantial bodily harm."

Surprisingly enough the mentally competent minor living with a spouse does not acquire the right to consent to sterilization either through the marriage or through "emancipation". Therefore, "it is the opinion of this office that a mentally competent minor living with a spouse must obtain the permission of his or her father (or the mother if he is dead or not available) before he or she may voluntarily consent to be sterilized. If both parents are dead or unavailable, then a duly appointed guardian must give the consent before the submission to sterilization surgery can be valid."

"We do not believe this consent would have to come from the court, **unless** the minor does not wish to be sterilized and his or her parents(s) or guardian insists otherwise, or unless the minor wished to be sterilized and his parent(s) or guardian had other thoughts."

For purposes of practical application of these legal principles, in the Louisville General Hospital the following policies have been

adopted:

1. There are no requirements of age or parity or marital status.

2. Any patient may apply for sterilization and receive counseling on this method of contraception.

3. Minor patients married and unmarried must have the concurrence of their parents or guardian before such a procedure can be contemplated.

4. Patients living in a stable relationship, married or unmarried, must have the concurrence of the spouse for the sterilization procedure.

5. Single patients or patients who are divorced, may apply for sterilization on their own consent without consenting spouse.

Patients who have been separated or deserted are treated in the same manner as patients who have been divorced. We ask the patient to make a simple statement to the effect that they have never been married, that they are separated or have been deserted by their husband for a period of time the patient states.

Each patient applying for sterilization is counseled by a physician and lay counselors in regard to the permanency of the procedure. All patients and their spouses are counseled that sterilization procedures are considered permanent and that no consideration for "untying" the tubes or vas deferens can be considered valid. We are taking a calculated risk with patients who have been separated or deserted but feel that in the interest of the patient's health and well being these decisions would very likely survive any court test of their validity. It is the opinion of Professor Ralph S. Petrilli of the University of Louisville School of Law that regardless of the circumstances of the separation or desertion that there is some risk of litigation in this respect. However, "the legal risk is in reality little more than adverse publicity or nominal damages since his desertion might well be used indirectly to minimize the amount of damages that would be awarded."

To further cloud the legal issues surrounding sterilization procedures, in recent years there has been a rash of suits brought against hospitals with restrictive sterilization policies by patients requesting sterilization. These suits



have been encouraged and sometimes financed by the American Association for Voluntary Sterilization, Incorporated. At the present time there exists an injunction against a Catholic hospital in Billings, Montana circumventing hospital policies dictated by the National Conference of Catholic Bishops and the United States Catholic Conference regarding sterilization. Several other cases in New York and New Jersey challenging restrictive hospital policies as regards to age, number of children and marital status have been upheld by the courts.

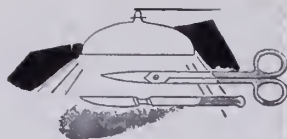
It appears that there are several legal questions involving hospital policies on sterilization one of which is the constitutional right of the individual to choose a surgical method of contraception regardless of age, parity, marital status and the presumed threat to the health and well being of the patient who, undergoing surgery or delivery in a hospital with restrictive policies regarding sterilization, may have to be transferred to another hospital for a sterilization procedure or undergo a second operative procedure for sterilization. There have not yet, to my knowledge, been any cases brought against physicians for failing to perform a sterilization procedure that was requested.

In regard to hospital policies it should be noted that in hospitals where the staff is able to set the policy of the hospital, in contradistinction to hospitals where religious principles set these policies, it should be noted that the American College of Obstetricians and Gynecologists has recommended that voluntary sterilization is a matter to be settled between the physician and the patient and that no committees or required consultation should be necessary. In fact, the legal status of the committees or consultation has been interpreted by the courts as invasion of the privacy of the patient. In addition, the Joint Committee on Hospital Accreditation has dropped the requirement for sterilization committees as well as abortion committees. While the Committee still recommends consultation no requirement is presently in existence.

In summary then, it may be stated that surgical sterilization is a method of contraception which may be selected by the patient and her physician without regard to age, parity or marital status. It is implicit that no physician

is required to perform such an operation if in his own judgment, the operation is not in the best interest of the patient, is against his moral or religious philosophy or carries a clear risk of exposure to litigation in the future. However, as in the case of any disagreement between patient and physician, the physician is required to refer the patient to another physician for consultation and the performance of this procedure if the consultant agrees. Physicians should acquaint themselves with the law and its ramifications so that they can make considered judgments in this regard and present the best service to the patient.

We have attempted to present the multiplicity of sterilization procedures available to the physician and to present some of the considerations of timing and type of procedure that best fits the patients' problems. In these days of sometimes alarming change, physicians do not always have the opportunity to acquaint themselves with the most recent technological advances and equally important the most recent changes in attitude and legal opinion in regard to the practice of medicine. It should be borne in mind, however, that women are more insistent than ever on control over their lives and bodies and the right to decide what medications, surgical procedures and advice they are willing to accept in regard to their reproductive and sexual functions. The advent and widespread usage of a variety of forms of contraception has given us tools which if used properly, can immeasurably improve the mental and physical health of women. The prevention of involuntary and unwanted pregnancy is one of the most important aspects in comprehensive health care of women in the child bearing age. In addition, if all unwanted pregnancies could be avoided, and theoretically they can be, through the proper application of all the contraceptive methods available to us then the health of future generations can be greatly improved. The proliferation of feminist oriented "self help clinics" indicates that we have failed to really communicate with our patients in this sensitive area. The aura of mystique and prejudice that surrounds female reproductive functions must be removed and we must accept the demands of patients for contraceptive methods acceptable to them regardless of our personal bias.



# GRAND ROUNDS



The University of Louisville School of Medicine

This Journal feature will be presented alternately by the University of Louisville and the University of Kentucky Departments of Medicine and Departments of Surgery. We hope to have these features revolve around subjects of immediate practical interest to the practicing physician; and, for those of us not able to attend grand rounds in the teaching centers as often as we might, we hope this will represent a bit of a refresher course.

## Progressive Vaccinia (Vaccinia Gangrenosum)

**P**RESENTATION of Patient: The patient is a 54-year-old married, white female admitted to the hospital with a chief complaint of fever, malaise and extension of the vaccination site on her left shoulder. The patient's past medical history included adult-onset diabetes mellitus, hypertension and hypertensive cardiovascular disease. In 1969, she underwent a left radical mastectomy for carcinoma of the breast. One month prior to admission evidence of metastatic disease appeared in the form of a pathologic rib fracture, pulmonary infiltrates and nodular cutaneous lesions over the mastectomy site.

In preparation for a trip to areas of Europe from which cases of smallpox had been reported, the patient underwent smallpox vaccination two weeks prior to admission. The scratch vaccination progressed to normal eschar formation in the left deltoid region until five days prior to admission when the area of erythema extended centrifugally and new vesicles and pustules developed in contiguity with the original lesion. (FIG. 1) This was followed by the development of non-contiguous vesicular lesions over the inner aspect of the left biceps and the ventral aspect of the left forearm. (FIG. 2) Single isolated lesions appeared on the left anterior tibial surface (FIG. 3) and right thenar eminence. This was accompanied by the development of generalized malaise, anorexia, easy fatigability and a temperature of 102-103° F.

Physical examination on admission revealed a temperature of 103° F, and pulse rate of 112/min. There was an ellipsoid 10 x 12 area

of erythema over the left deltoid containing a large white eschar with central area of necrosis measuring 4 x 4 cm. (FIG. 1) Multiple pustules surrounded the eschar, each measuring from 0.5 to 2.0 cm in diameter. The inner aspect of the left biceps, the ventral aspect of the left arm and the left anterior tibial surface had pustular lesions of 0.5 to 1.5 cm, each situated on an erythematous base. (FIGS. 2,3)

The hemoglobin was 12.5 gms % and hematocrit 37.2%. The white-cell count was 8,700/cm<sup>3</sup> with 51% neutrophils (11% band forms), 25% lymphocytes, 12% monocytes

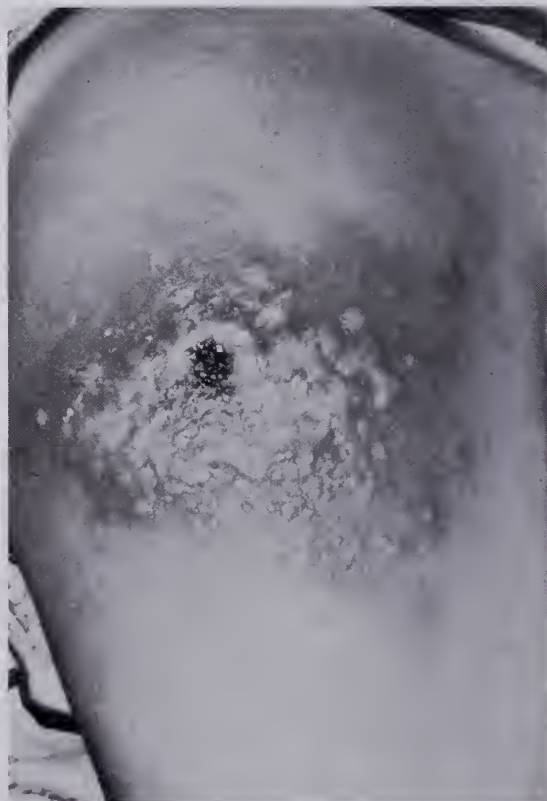


FIG. 1 Progressive vaccinal eschar over left deltoid region.

*From the Department of Medicine, University of Louisville School of Medicine*





FIG. 2 Metastatic vaccinal pustules over medial aspect of left biceps.

and 1% eosinophiles. Urine analysis revealed 4 + glycosuria with negative ketones, negative protein and there were 2-4 white blood cells per high-powered field. Her fasting blood glucose was 175 mg%, and blood urea nitrogen and electrolytes were within normal limits. She had an SGOT of 1,000 mu/ml, LDH of 500 mu/ml, CPK of 50 mu/ml, Alkaline phosphatase was 150 mu/ml, total bilirubin 1.2 mg%, creatinine 0.7 mg%, and total protein 7.9 mg% and albumin of 4.5 mg%.

Routine cultures obtained from the surface of the major eschar grew *Staphylococcus aureus*. All other cultures, including blood, throat, urine and sputum were unrevealing. Viral cultures obtained separately from each of the lesions (eg. one from the eschar, one from the forearm, and one from the anterior tibial surface) grew a virus which has been tentatively identified as vaccinia virus.

After a presumptive diagnosis of progressive vaccinia was made, the patient was given 10 cc of vaccinia immune human globulin (VIG). Serum for vaccinia antibody titers was obtained prior to and immediately following the administration of vaccinia immune globulin as

well as six weeks later, but the results are pending. She was not given antibacterial therapy as it was felt that the *Staphylococcus* isolated was a superficial contaminant and secondary infection was not evident clinically. The patient gradually defervesced, becoming afebrile on the third hospital day. At the time the erythema faded, the small lesions distal to the primary eschar healed and the eschar itself crusted over and appeared to be healing. Six weeks later the patient has only a 2 x 3 cm crusted lesion surrounded by erythema remaining at the original site of vaccination. (FIG. 4)

### Discussion

Complications of smallpox vaccination may be grouped into those which occur due to dissemination of the virus from the site of inoculation and those which result from other circumstances. Local complications include secondary bacterial infection and unusually severe reactions to the vaccination. The etiologic agents of secondary infection are most often *Staphylococcus aureus* and *Streptococcus pyogenes*, the latter occasionally presenting in an inapparent fashion by producing a seropurulent cellulitis hidden beneath the crust of the primary vac-



FIG. 3 Single metastatic vaccinal lesion on left anterior tibial surface.



cinal eschar. Some individuals, either through increased susceptibility to the virus, due to receipt of an unusually large inoculum of virus, or through receipt of an inoculum of heightened pathogenic potential, develop an extensive necrotic lesion with severe peripheral inflammation and local adjacent lymphadenopathy. Healing will occur spontaneously but may leave a larger residual scar. Neoplastic growth can occur in these sites in later years.

Erythema multiforme, occurring at the same time as the reaction at the site of vaccination can appear over diffuse areas. It may be maculopapular, vesicular or urticarial. The vesicular form may be confused with disseminated vaccinia. The intense erythema surrounding the lesions, and the severe pruritis which occur in erythema multiforme serve to differentiate the two conditions. The erythema multiforme will resolve within two to three days without the use of anything other than symptomatic treatment.

Accidental inoculation of vaccinia virus onto sites other than those intended can involve exposed cutaneous surfaces, mucous membranes or the eye. The two former situations do not usually present a major problem, will heal without residual scarring, and can be managed symptomatically. Vaccinia keratitis secondary to intra-ocular viral deposition is a severe and potentially blinding illness which can be treated with the local application of 5-iodo-2' deoxyuridine (IDU). Vaccinia immune globulin should not be used in this condition as clouding of the cornea occurs, presumably through the deposition of antigen-antibody complexes. VIG may be effective in preventing extension of the virus onto the corneal surface when periorbital seeding has occurred without intra-ocular disease. In either event, ophthalmologic consultation and slit lamp examination is warranted.

Post-vaccinal encephalitis has its onset approximately 10 days to three weeks after vaccination. A meningoencephalitic syndrome, it does not appear to be due to viral dissemination, but rather to a hypersensitivity phenomenon, although the etiology remains unproven. Therapy is supportive and neither VIG or thiosemicarbazone seem to have been effective in the few rare cases in which they have been applied.

Three complications may occur due to dissemination of the virus from the primary site of inoculation. Eczema vaccinatum may occur when individuals with atopic dermatitis are vaccinated or have the virus transferred to their skin from a recently vaccinated sibling or acquaintance. It must be remembered that the atopic individual need not have active or open dermal lesions for this to happen, and that other skin conditions may also predispose to this type of syndrome. This is an extremely severe complication and should be treated with VIG and/or thiosemicarbazone, which are of proven efficacy.

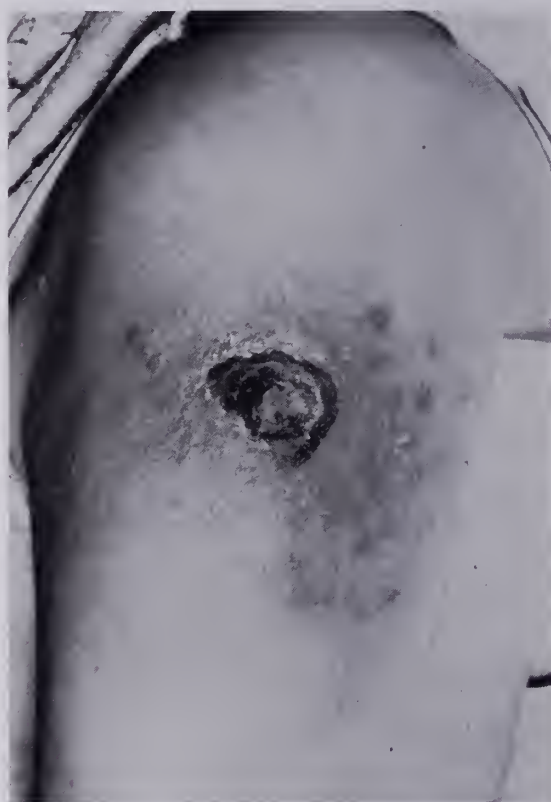


FIG. 4 Healing vaccinal eschar over left deltoid region.

Generalized vaccinia is a condition in which the primary lesion heals and vaccinal lesions appear over the body between one to two weeks after vaccination. These lesions usually appear simultaneously and heal without residual scar formation. Multiple crops of lesions can develop for as long as two years after vaccination, but this is rare. The rate of resolution can be increased and incidence of recrudescence decreased by the use of VIG. In any event, this is a relatively benign syndrome in which the antivaccinal antibody response

has been delayed but eventually rises sufficiently to eliminate the development of further lesions. This disease should be distinguished from erythema multiforme, as described above.

Progressive vaccinia, synonymous with vaccinia gangrenosum and vaccinia necrosum, has three distinguishing features, two of which were seen in today's case. First, there is extension of the area of the primary vaccination with the central portion of it becoming necrotic. The progression may involve large areas of skin, and satellite lesions form contiguous to the primary eschar. Secondly, metastatic viremic lesions appear as vesicles and pustules over various areas of the body. If untreated, the third characteristic, slow progression with deep tissue invasion, secondary bacterial infection, pneumonia and other complications lead to an eventually fatal termination. Although some of those who develop progressive vaccinia are individuals who manifest immunologic deficiencies, some are apparently normal. Since the immune response to viral challenge involves more than just humoral antibody response (eg. delayed hypersensitivity reactions and interferon formation) it may not be possible to identify the susceptible individual using currently available techniques. Patients with malignant diseases, particularly those with hematologic malignancies, have been demonstrated to have acquired immunologic deficiency states. It is entirely possible, and perhaps even likely that this patient's underlying metastatic breast carcinoma contributed to her susceptibility to progressive vaccinia. However this remains unproven and only speculative.

Therapeutic considerations include both passive immunization with vaccinia immune globulin, and active antiviral therapy with thiosemicarbazone. The former material is prepared from the serums of recently immunized individuals, and being derived from human sources is free of the risk of serum sickness. The recommended dosage of VIG for the management of accidental inoculations, generalized vaccinia or progressive vaccinia is 0.6 ml per kg of body weight. A single intramuscular administration at this dosage level will usually be sufficient to manage most complications. Large

er doses, repeated administration and/or combined therapy with thiosemicarbazone may become necessary however, particularly in severe cases of progressive vaccinia.

Thiosemicarbazone is an antiviral agent whose mode of action is not fully understood. It is apparently effective in the management of progressive vaccinia, either alone or in combination with VIG. It is available as an orally administered preparation which may be poorly tolerated due to nausea and vomiting. The initial recommended dose is 200 mg per kg of body weight followed by 50 mg per kg every six hours for three days.

Other therapeutic regimens utilizing either systemically administered IDU, the use of interferon inducers, lymphocyte transfusions and the use of lymphocyte transfer factor remain purely experimental and will not be discussed further.


In summary, the reasons for individual susceptibility to this syndrome remain unclear, and with the declining usage of smallpox vaccination may remain that way for some time. Hopefully however, future research into immunologic mechanisms may serve to further our understanding of deficiencies in this area and of diseases which occur as a result of these deficiencies.

MARTIN J. RAFF, M.D.

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## SPECIAL ARTICLES

### Professional Standards Review Organization†

SENATOR WALLACE F. BENNETT\*

I appreciate the privilege you have extended to me to speak tonight about my Professional Standards Review Organization Amendment—a subject which has commanded much of my time and attention over the past two years. Before I describe it in detail, I want to bring you up-to-date on its genesis, its history and its present status. Before I am through I will also want to touch briefly on another, but related, subject—the National Health Plans now before the Congress.

The need for some effective mechanism to insure and control the quality, appropriateness and duration of medical care provided under government-sponsored and funded programs became glaringly obvious soon after the twin Medicare and Medicaid programs became law. Costs skyrocketed far above original estimates and the ultimate shocker was a forecast that unless some workable control system was discovered—over the next 25 years—the excess of costs over estimates on Medicare alone would reach \$242 billion.

To its great credit, the AMA responded to that need by suggesting an important concept—the Peer Review Organization, and it is important to remember that my PSRO is basically an adaptation of that idea intended to permit its practical administration by the Federal government, while preserving the greatest possible reliance on practicing physicians.

While the AMA's proposal gave us a basic concept on which to build, it left us with some fundamental questions of policy, not the least of which was the decision as to whether any private association, organized for the self-interest of its members, should be given the power to administer Federal law under which those interests might come into conflict with those of the general public. The common phrase used over and over by opponents of the idea is that the fox should not be put in charge of the hen house. You and I know, (and my PSRO amendment is based on my faith), that most physicians are responsible men. But unfortunately, enough exceptions keep making the headlines to make the public uneasy. This very week, in Washington, the papers are carrying the story of four doctors

who averaged \$100,000 last year on Medicaid patients alone, and 54 others who received more than \$20,000 from the same source. Allowing the maximum rate for each patient treated, one doctor would have had to work 13 hours a day, 365 days a year just to cover his Medicaid patients, but he also works 20 hours a week for the D.C. Mental Health Department and 20% of his total patient load is non-Medicaid.

I will agree that this example is extraordinary, but revelations like this have a tremendous impact on public opinion.

We would be kidding each other if we were to deny that many Americans are suspicious of all private, professional and industrial organizations, including organized medicine. Any approach to review which delegated responsibility to privately organized medicine without real—as opposed to apparent—government safeguards, would in my opinion, be unacceptable to both Congress and the public at this point in time.

The Professional Standards Review Organization approach, to my mind, provides an opportunity for medicine to earn organizationally the kind of trust that most doctors have earned individually.

How does PSRO differ from PRO? It seeks to create a practical partnership between government and medicine for the protection of each—and to produce the best and most appropriate service to the medical patient.

The government—through the Secretary of HEW—properly has the ultimate responsibility for review, but the amendment imposes upon him a commitment to give first priority to the delegation of responsibility for professional review of health care services to organizations of physicians especially organized for the purpose. To such an organization would be given complete responsibility for evaluating and ruling upon the medical necessity of care, determining whether the care was provided in accordance with professional standards, and where medically appropriate, encouraging the attending physician to use less costly sites and modes of treatment.

I think it is essential to note, at this point, that under no circumstances do the responsibilities of PSRO reviewers include an evaluation of fees, costs or methods of reimbursement. These are covered by the contract between HEW and the carriers. The Senate version of H.R.1 creates the new office of Inspector-General, and it is my understanding that

†Presented at the KMA Interim Meeting, April 13, 1972, in Somerset

\*Ranking Republican on the Senate Finance Committee from Utah



he will have the ultimate responsibility for auditing these.

PSRO requires the broadest possible involvement of practicing physicians as reviewers serving on a rotating basis. Its thrust is informational and educational—not punitive. To my mind, the original PRO constituted an expression of concern on the part of organized medicine in the face of a pressing need for expanded medical review activity. Medicine is to be commended for that concern. Professional Standards Review Organization legislation encompasses the AMA's PRO objectives but substantially expands its responsibilities and contains added necessary and appropriate public interest safeguards.

When Congress passed Medicare and Medicaid in 1965, we instituted a system of Government health care financing patterned in good part after private insurance, and we placed many buffers between Government and medicine. This seemed appropriate to me, because I do not believe that Government should become involved with details of day-to-day medical practice if appropriate non-governmental alternatives are available.

I was then—and I remain—convinced that the Government and its agents do not have the capacity to effectively and appropriately audit medical care provided under the Federal programs. Aside from the question of whether Government **could** effectively audit the need for and the quality of medical services, I had doubts as to whether Government **should** perform those functions. It seemed to me that the key to making a review system workable and acceptable was the practicing physician.

There is obvious merit in placing review responsibilities with those best able to decide whether care is necessary and of proper quality—the practicing physicians themselves—as opposed to lodging those responsibilities with Government agencies or insurance companies, even though the men actually employed to do the reviewing might be physicians. Obviously, such employees would either have retired or would have to retire, and would have already lost—or soon would lose—their touch with medicine's rapidly changing science. Moreover, such reviews would reflect the necessarily limited experience of one man—while the PSRO concept, based on a large rotating group can bring to bear any or every specialty needed in any particular case.

Starting with these goals, the actual drafting of the amendment began. During that work we sought to build an effective system of comprehensive review based upon traditional private medical practice.

The idea of using provider, practitioner and patient profiles was incorporated because of the successful use of those review tools in medical society-sponsored foundations in California and elsewhere. Emphasis in the amendment upon relating institutional care review to length-of-stay norms, also grew out of the successful experience in the use of that type of yardstick by the California foundations, individual hospitals and other third-party payment programs. As you know, data on hospital utilization related to age and diagnosis have been developed and are maintained

on a current basis by the Commission on Professional and Hospital Activities incorporating the actual experience of more than 55 million hospital admissions.

After months of effort, the amendment was ready to be introduced. It was offered well in advance of formal consideration of the Social Security bill of 1970. I introduced the amendment early so that all parties in the health care field could give it careful and constructive consideration.

Obviously the amendment, if enacted, would have major impact upon medical practice. It was expected that interested organizations would use the opportunity provided by this early introduction to evaluate the proposal and then offer their comments and suggestions in testimony before the Finance Committee last fall. Indeed, this is exactly what occurred. I have had many conferences with representatives of AMA-AHA-state medical associations-Blue Shield-representatives of other health care practitioners, as well as with physicians practicing individually and as members of various group practice programs—including HMO's. In addition, during its formal consideration of the amendment, the Senate Finance Committee received and reviewed pertinent testimony from a variety of concerned individuals and organizations. Realizing the validity of some of the recommendations, we made some important modifications in the original text of the amendment. In this modified form it was approved by the Committee and, ultimately, the full Senate, in 1970, and again in a further up-dated version by the Committee this year.

Among the important changes was increased emphasis upon the continuing use of existing in-house institutional utilization review mechanisms, which could be accepted if they were judged satisfactory in performance by the PSRO. Another change resulted in a modification of the prior approval requirement for elective hospital admissions so as to limit the requirement of prior approval in those diagnoses, practitioners or institutions where, on the basis of past performance, the PSRO believed prior approval necessary to adequately control utilization.

The Committee expected that PSRO's would not indiscriminately accept hospitals in-house review or avoid requiring prior approval, with respect to elective admissions. Indiscriminate and blanket acceptance by a PSRO of in-house hospital review would probably be reflected in overall poor performance results by that PSRO. Common sense and realistic evaluation should be the PSRO approach in determining the effectiveness of in-house review, hospital-by-hospital. Of course, hospitals with inadequate internal review would be encouraged to upgrade their activities to the point where such review could be accepted by the PSRO and thereby avoid the necessity for the PSRO to duplicate the hospitals' review work.

Priority under the amendment must be given in every case and every area to designating as the PSRO an organization representing a substantial proportion of practitioners, assuming that the organization is willing to undertake the effort and meets the necessary requirements. As far as I am concerned, to do less would seriously impair our offer to organized medicine; that is, "If you are willing and capable of

undertaking necessary comprehensive review in accordance with our conditions, we in turn will give your profession the first opportunity and resources to monitor itself."

If not a vigorous PSRO, then what? What are the alternatives, and will they work any better? Let's look at each briefly:

1. Let's adopt the PSRO idea, and then just give lip service to it. In my opinion, this will not work. The stakes are too high and public concern and scrutiny too great for anyone to delude himself that a pro forma PSRO operation will be acceptable. I certainly hope that some medical organizations will not make the mistake of regarding PSRO as a means of getting the Government and the public off their backs by virtue of a minimum of effort and a maximum of appearance. It is too late in the day for that. Substance, not form, will be the test of a PSRO. Performance and professionalism will be the criteria of judgment.

2. Let's push for the original PRO idea—with control of review in the hands of the state medical societies. My early opinion that this would not be either politically or practically possible led to the development of the modification of PRO into PSRO in the first place—and that opinion has grown much stronger as the Committee and I have studied the problem.

Medical societies are involved in varying degrees with the whole gamut of physician concern—including the matter of payments. Sometimes, they are even indirectly involved in political questions. The PSRO on the other hand, has a much narrower sphere of direct operating interest: namely, the appropriateness and quality of medical care. Also, as you know, again in varying degrees, medical societies do not include all practicing physicians as members. A PSRO, in contract, must be absolutely open to all practicing physicians without membership or dues requirements whatsoever. Conceivably, there is also the possibility that if PSRO responsibilities were vested in a medical society it could use that power as leverage to implicitly or explicitly coerce non-members.

The Chief of Anesthesiology of a very large medical group on the West Coast posed the problem rather succinctly in a recent letter to the Executive Director of the medical group. He said:

"As for myself, I know that I will never accept any review of my practice by the county medical society. They have been too overt in their prejudice against me personally by not permitting me to become a member for eight years. We must not simply accept these government rulings, which place considerable power in the hands of organizations which for years have fought us in so many ways. They are still full of prejudices toward us, and often try to damage us in the eyes of the public by derogatory remarks and letters about our physicians and our organizations."

You and I know that the type of situation described by the good doctor has occurred. I seriously doubt that it occurs to any serious extent today—but it is possible—and it would be intolerable in any organiza-

tion to which the Federal Government delegated review responsibility. A PSRO, independent of any privately run medical society, would help minimize unfortunate memories and possibilities.

Additionally, a separate legal structure for the PSRO's also permits extension of malpractice exemption in clear fashion and affords generally clear-cut legal relationships which might be blurred and a problem if merged with medical societies overall operations.

County medical societies or groupings of county societies and state societies—particularly in smaller states—would in many cases be the logical spark-plugs and sponsors of separate PSRO organizations. This has been done in my own state of Utah.

The emphasis throughout the PSRO amendment is establishment of review organizations of proper size at local—not state—levels unless that state is too small to support anything but a statewide organization.

3. A third alternative that has been suggested would be to turn the review process over to the carriers and intermediaries. I'm sure this would not work either.

The responsibilities of the PSRO organization are strictly those which, to my mind, involve non-negotiable professional medical judgments.

By non-negotiable, I mean, for example, that the medical necessity of surgery is not an item of bargaining between a third-party payer and doctors. The question of the necessity of surgery is strictly one of medical judgment. But the amount to be paid for that surgery by a third-party can legitimately be discussed and negotiated by physicians and non-physicians. PSRO's should not be involved with the amount of payment for a given service but rather its necessity. And, obviously, government cannot hand over a book of signed checks drawn on the Treasury and ask the payees to fill in the amounts!

4. A fourth alternative would be to approve the PSRO idea only for a pilot or trial test. This is the approach contained in H.R.1 as passed by the House. But events and time have made this unnecessary, and I believe that when we get to conference the House conferees will abandon this position.

The reason for this is that several such trials have already been made. The most significant has been in New Mexico—a small state with only 800 physicians. Here the state medical society sponsored the New Mexico Foundation for medical care which in turn assembled a PSRO and reviewed every Medicaid case. The results were phenomenal.

A prototype PSRO, which has been operating in New Mexico since September of last year, has already shown some very encouraging results. The New Mexico Medicaid program is, for the first time, being run within its budget this fiscal year. In fact, the program has been so well controlled that the state has been able to expand the services which it offers under its Medicaid program and still remain within its Medicaid budget. In addition, I understand that they intend very soon to increase their payments to physicians under Medicaid. Physicians had been paid at the 51st percentile of usual and customary charges,



and this will soon be raised to the 75th percentile. These cost savings have stemmed directly from the Professional Standards Review activities.

One review activity has been the institution of a requirement for prior approval of elective surgical procedures under Medicaid. When this prior approval was first initiated last fall, about 200 requests a week for elective surgery were received by the review organization. Of these, about 100 were approved, 50 were denied and the remaining 50 were returned for further information. The reviewers at the New Mexico foundation were fascinated to observe that, during the course of a few months following the institution of prior approval, they were still approving about 100 surgical procedures a week, though the number of requests for approval had dropped to approximately 150.

In the area of nursing home care, the physicians in the New Mexico foundation instituted a careful review of all nursing home patients in New Mexico. They found that some 30% of the patients in these institutions did not need institutional care, and the state had begun to develop alternate placement for these people, using boarding homes, rental housing and home health services.

Detailed statistics on the effect of review activities on hospitalization in New Mexico are not yet available because the intermediary did not have good base line data to measure against. However, in the neighboring state of Colorado, accurate base line data were available. Comparable hospital review activities by the Colorado Medical Foundation showed a decreased length of stay for Medicaid patients of over one day per admission. The average length of stay prior to the institution of review activities for a Medicaid patient, was 6.1 days; this dropped to 4.9 days. Along with this, there was approximately a 10% decrease in Medicaid admissions.

Georgia has had a similar experience—a review of Medicaid patients in nursing homes revealed that at least 20% of all patients in comprehensive care facilities could be transferred to less expensive facilities.

The oldest pilot program has been operated in California. The San Joaquin Foundation's records show that its review process reduced Medicare costs 20% in 1968—its first year—and 14% each year thereafter.

Every pilot program has produced positive results. In my opinion no further tests are needed.

5. Turn over the review process directly to an agency of government—either HEW itself—or some appropriate state health agency.

The weaknesses and disadvantages of this should be self-evident. I have already pointed out the limitations inherent in using non-practicing physicians as reviewers. To this must be added the inescapable rigidity of bureaucracy—the self-protecting timidity that infects civil servants and the dangers of distance between the reviewers and the reviews.

As a matter of fact, the Bennett amendment reluctantly provides for this solution, but it can only come into being in an area where:

1. The local physicians are unwilling or unable to form a PSRO group.

2. If, after creating a PSRO group, they fail to function effectively. The bill requires the secretary to give better priority and initiative to the local practicing physicians and he can only step in when they fail to act.

Our experience with Medicare and Medicaid have demonstrated the need to monitor the quality and appropriateness of the medical care they provide. The Senate Finance Committee has taken a second look at the Bennett amendment in its latest modified form, and written it into this year's bill by a near unanimous vote. Since the whole Senate approved it in 1970, we can expect it to be approved again, particularly since we have had dramatic demonstrations of its value in California, New Mexico, Georgia and elsewhere. I frankly think the question is no longer "if" but "when." And it is obvious that the "when" is 1972.

Because the bill on which we are working (H.R.1) affects only Medicare, it follows that the review process it sets up will, by law, involve only a small fraction of most physicians' total practice and number of patients.

The final alternative is supported by those who want no law requiring review. Some resent any scrutiny of their practice—others think existing hospital review is good enough. The very fact that hospitals had established in-house review programs is proof of their need. There is also evidence that the very existence of the AMA-PRO program and the Bennett PSRO Amendment has served to stiffen and toughen the existing review mechanisms because hospital overutilization has already begun to come down. But in my opinion—unless the review requirement is written into law, and broadened to cover services outside the hospitals—these excesses will sneak up again.

We on the Finance Committee have looked at all these alternatives and feel that none will work as well as PSRO to protect the patient, the physician and the bill-paying government.

At first the benefits of PSRO will be limited to Medicare patients, but once established they soon carry over to produce improvement of the services to all other patients—public or private. In fact, it will immediately affect another new service which will most probably be included in H.R.1 when it is reported out by the Committee. I refer to Chairman Russell Long's idea for coverage of catastrophic illness for everybody. Since its benefits are triggered after the 60th day's hospital stay, it is obvious that a careful review must have been conducted immediately preceding that event—and since the catastrophic provision it adopted will become a section of the Medicare law, it automatically becomes subject to PSRO review. But PSRO will become absolutely essential if and when a few years from now Congress adopts any one of the several general health plans that have been introduced, or any variation or combination thereof. Since people as far apart as President Nixon and Senator Kennedy have sponsored legislation for this purpose, I'm sure it is only a matter of time before the basic idea of health care for everybody



will be adopted in some form—and when that happens, any mechanism we adopt now to review the quality and appropriateness of all medical care will become a vital and integral part of the practice of medicine. By seizing the opportunities for participation which the Bennett amendment gives to all practicing physicians—you will be acting to preserve your personal freedom as well as the high standards of your profession.

To summarize quickly, the intervention of government into health care is an accomplished fact. First Kerr Mills—then Medicaid—now Medicare and to-

morrow some system to cover everybody. Excesses of over-utilization and unnecessary procedures, while fortunately limited, validate the need for adequate medical review. This should be done only by physicians and under my PSRO all practicing physicians will have a chance—the first chance to participate in the process. This is the path to free medicine—the alternatives—review by government agencies or carriers lead only to bureaucratic tyranny, which I am as anxious to prevent as you are. This, then, is my case for the Bennett PSRO Amendment. I hope you will accept and support it.

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## EDITORIALS



### Medicare: Concepts and Misconceptions

**I**N just a few months, the Medicare program will have been in operation for seven years. Few would deny that it has been a boon to the elderly in helping them meet the steadily rising costs of health care. Most would also concede that the medical profession generally has cooperated in making Medicare work—as well as it has.

In spite of this, however, there are many who are unhappy with Medicare. The elderly, and their relatives, are dissatisfied because they have learned that Medicare does not pay **all** of their medical expenses, contrary to what they had been led to believe when the program was adopted by Congress. This, we believe, is the fault of the government in failing to explain, in laymen's terms, the limitations of coverage written into the law and its regulations.

Many physicians are unhappy with Medicare, not only because of the arbitrary limitations placed on fees under Part B of the program, but because the claims of their patients for Part A benefits are sometimes denied on the basis that they are for non-covered services.

This discontent is, likewise, due to a misunderstanding of the law, as well as the traditional resentment toward anyone outside the profession questioning one's medical judgment. There really seems to be less excuse for these misconceptions on the part of the profession (in comparison to the public) except for the propensity of the average physician to make liberal use of File 13 for anything on a Medicare letterhead.

It might be worthwhile, then, to repeat a few of the basic concepts related to the administration of Medicare.

1. Medicare was not designed to pay all health care costs for those over 65.
2. The Medicare regulations, having the force of law, are written by the Social Security Administration—not by the Intermediary.

3. The Intermediary is legally obligated to abide by the regulations and does not have the privilege of making exceptions, no matter how worthwhile they may seem on moral, social or emotional grounds.
4. The funds disbursed by the Intermediary are not Blue Cross or Metropolitan funds—they are government (tax) dollars.
5. In making a determination to deny benefits on a Medicare claim, the Intermediary is not questioning the medical judgment of the physician—it is merely fulfilling its obligation to determine whether or not the services were "covered" under the law. Medicare funds cannot be disbursed for "non-covered" services no matter how important or desirable they were in the eyes of the physician.

There are fairly definite criteria utilized in making these determinations. Recognizing that the Intermediary does not have the advantage of personal contact with the patient, but must base its judgments on the medical records made available to it, emphasis is given to the importance of accurate documentation of the services rendered to the patient.

Foremost among these criteria is that the services must be medically reasonable and necessary in the diagnosis and/or treatment of the illness or injury for which the patient is hospitalized. This effectively rules out routine physical check-ups, routine laboratory tests (e.g., SMA, VDRL, Pap smears) not required by the JCAH, and any screening procedure not related to the patient's complaints or disease.

In-hospital benefits may be paid for care in an acute hospital if the condition of the patient requires:

1. Continuous **skilled** nursing services
2. The constant availability of a physician, and
3. The sophisticated facilities and equipment usually found only in a hospital. Such benefits cannot be paid if the patient requires only "custodial care", e.g., bathing, feeding, oral

medications, assistance in and out of bed, etc., even if these services are rendered by skilled personnel.

Keeping these criteria in mind when caring for a patient, or when serving on a utilization review committee, should serve a two-fold purpose:

1. Reduce the degree of misunderstanding

of Medicare and its administration on the part of both physicians and patients, and

2. Reduce the number of retroactive denial of benefits resulting, in many instances, from these misconceptions.

HBA

## PSRO

**I**n the midst of the commitments of many committees, the founding of many Foundations, and a generally high titer of medical Angst throughout the state, it ought to be a propitious time now to bring forth as much factual data as possible concerning Professional Standards Review Organizations.

At our KMA Interim Meeting in Somerset last April, several speakers addressed themselves to the potentials likely to be generated at

the government-medicine interface in the near future; and one of the gentlemen was the senatorial sponsor of a Social Security amendment at that time. Since he spoke, his bill has become law; and his explanation of that bill to us, as physicians, therefore takes on considerable meaning.

On page 96, gentlemen, Senator Wallace F. Bennett.

WHj





## ORGANIZATION SECTION



### Authoritative Speakers To Challenge Physicians Attending the 1973 KMA Interim Mtg. March 29-30

The 1973 KMA Interim Meeting will again feature many outstanding and authoritative speakers at the two-day session held March 29-30 at Lake Barkley Lodge in Cadiz.



Doctor Nesbitt



Doctor Budd

Vice-Speaker of the American Medical Association House of Delegates, Tom Nesbitt, M.D., Nashville, will join out-of-state and Kentucky physicians and leaders in discussing "The Challenges of Health Care Delivery." Doctor Nesbitt will present AMA's views on Thursday morning, March 29, following a panel discussion on "Some Approaches to Health Care Delivery." The panel, moderated by Walter I. Hume, Jr., M.D., Louisville, will include presentations by Leslie W. Blakey, M.D., Lexington; George F. Brockman, M.D., Greenville; W. Neville Caudill, M.D., Louisville, and Dan A. Martin, M.D., Madisonville.

How Kentucky measures up in health manpower, costs and insurance will be the next program topic. Joseph Hamburg, M.D., Lexington; Lowell H. Steen, M.D., Hammond, Ind., and Harold B. McGuffey, Kentucky Commissioner of Insurance, will deal with these aspects.

The annual dinner and keynote address will be held on Thursday evening preceding a social hour hosted by the Pennyryle Medical Society.

"Health Care" will be Friday morning's theme and physicians will hear viewpoints from consumers, hospitals and Congress: Robert V. Bullock, Kentucky Assistant Attorney General; Wade Mountz, President, Norton-Children's Hospital, Louisville; John H. Budd, M.D., Member, AMA Board of Trustees; James W. Foristel, LLB, AMA Washington Office, and Robert E. Rinehiemer, President, Pennsylvania Blue Shield.

David A. Hull, M.D., Lexington, President, Kentucky Foundation for Medical Care, will present a challenging address on "Where Do We Go From

Here" to conclude the two-day annual meeting.

Question and answer sessions will be provided at the end of each day's session as time allows. No meetings have been scheduled during the afternoons so as to provide free time to enjoy the many recreational facilities offered by Lake Barkley Lodge.

KMA President, Lee C. Hess, M.D., Florence, urges all Kentucky physicians to attend this informative and important meeting. A reservation form is printed in this issue of *The Journal* for your convenience. You may find this form on page 104.

### 18th Lexington Clinic Meeting To Study Gastroenterology

"Clinical Problems in Gastroenterology" will be the topic for the 18th Annual Clinical Conference of the Lexington Clinic to be held Thursday, April 5.

Guest speakers for the all-day session include William D. Davis, Jr., M.D., New Orleans and John W. Schaefer, M.D., Denver. Doctor Davis is the head of the Department of Medicine and chairman of the Section of Gastroenterology of the Ochsner Clinic and Ochsner Foundation Hospital. Besides serving as Associate Professor of Medicine at the University of Colorado School of Medicine, Doctor Schaefer is the Chief of the Division of Gastroenterology at Denver General Hospital.

Members of the Lexington Clinic staff will also participate and will deal with such topics as inflammatory bowel diseases, colonic diverticular disease, hepatitis, gastric ulcers and hiatus hernia.

Acceptable for six hours of prescribed credit from the American Academy of Family Physicians, the program is open to all physicians. Additional information and registration (which is free) may be obtained by contacting Ben Watson, M.D., Lexington Clinic, 1221 South Broadway, Lexington, Kentucky 40504.

### Freedman Lectures Planned

John A. Kirkpatrick, Jr., M.D., Professor of Radiology, Temple University School of Medicine, Philadelphia, will deliver the 25th annual Joseph and Samuel Freedman Lectures in Diagnostic Radiology on March 24 and 25 at the University of Cincinnati College of Medicine. Physicians desiring to attend are requested to contact Benjamin Felson, M.D., Department of Radiology, Cincinnati General Hospital, Cincinnati, Ohio 45229.

## Digest of Board of Trustees Minutes

December 7, 1972

THE second regular session of the KMA Board of Trustees was held on December 7, 1972, at the Headquarters Office. The President's Report and the Report of the Delegates to the AMA were accepted for information. In addition, several members of the executive staff presented brief reports so that members of the Board could be better informed regarding KMA's total range of activities.

Action on committee activities and recommendations included:

✓Orientation to be held in 1973 once more on a voluntary basis.

✓Executive Committee recommended appointment of an ad hoc committee to study a plan and bring to the Board recommendations concerning KMA Trustee and Comprehensive Health Planning districts being the same.

✓Accepted the report of the ad hoc committee to study the Judicial Council matters and the individual recommendations of that committee.

✓Set a date for the annual Washington Dinner, March 12-13, 1973, at the Washington Hilton Hotel.

✓Appointed William W. Hall, M.D., Owensboro to meet with the Kentucky Nurses Association regarding changes in the Nurse Practice Act.

✓Approved recommendations for a Legislative Affairs Seminar to be held in conjunction with Smith Kline and French Laboratories in 1973.

✓Approved and finalized the program for the 1973 Interim Meeting.

✓Voted to approve expenditures of \$2500 over the next three years by the Public Relations Committee to prepare a KMA booth to be used wherever we are asked to exhibit.

✓Voted to approve sponsorship of a WAVE tele-

vision special on Christmas Eve on the life of Doctor Ephraim McDowell.

✓Approved construction of new offices for the Department of Medical Licensure in the basement of the Headquarters Building.

✓Appointed an ad hoc committee to investigate medico-legal guidelines.

In other action the Board heard from David A. Hull, M.D., President of the Kentucky Foundation for Medical Care, and voted to advance the Foundation \$1,000 providing legal counsel determines it can be legally accomplished.

In addition to Doctor Hull, the Board heard a report on PSROs from W. Neville Caudill, M.D., Chairman of the Claims and Utilization Review Committee.

William P. McElwain, M.D., Commissioner of the Department of Health and President of the Medical Licensure Board, stated the Licensure Board had adopted an annual registration fee for Kentucky physicians of \$12.00.

The KMA Board also approved sending the Speaker and Vice-Speaker of the KMA House of Delegates to the Southeastern Conference of Speakers if money is available for such a project.

Dale Farabee, M.D., Commissioner of Mental Health and a member of the KMA Legislative Committee, spoke in regard to Resolution L which concerns admissions to state hospitals. He stated his feeling that the major problem is a misunderstanding of the law. He gave several examples of problems that have arisen as a result of misinterpretation.

The date of the next Board meeting was set for March 28, 1973, at Lake Barkley Lodge immediately preceding the KMA Interim Meeting.

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### KENTUCKY MEDICAL ASSOCIATION INTERIM MEETING, MARCH 29-30, 1973 REQUEST FOR ACCOMMODATIONS RESERVATION

Complete and mail directly to Lake Barkley State Resort Park, Cadiz, Kentucky 42211. Telephone (502) 522-3261.

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Address \_\_\_\_\_

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Arrival Time \_\_\_\_\_

Remarks: \_\_\_\_\_

Note: This reservation is for the Kentucky Medical Association meeting, March 29-30, 1973.



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**Warnings:** Caution patients about activities requiring alertness (e.g., operating vehicles or machinery). Warn patients of possible additive effects with alcohol and other CNS depressants.

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**Effect on PBI Determination and  $I^{131}$  Uptake:** Isopropamide iodide may alter PBI test results and will suppress  $I^{131}$  uptake. Substitute thyroid tests unaffected by exogenous iodides.

**Precautions:** Use cautiously in persons with cardiovascular disease, glaucoma, prostatic hypertrophy, hyperthyroidism.

**Adverse Reactions:** Drowsiness, excessive dryness of nose, throat or mouth; nervousness; or insomnia. Also, nausea, vomiting, epigastric distress, diarrhea, rash, dizziness, weakness, chest tightness, angina pain, abdominal pain, irritability, palpitation, headache, incoordination, tremor, dysuria, difficulty in urination, thrombocytopenia, leukopenia, convulsions, hypertension, hypotension, anorexia, constipation, visual disturbances, iodine toxicity (acne, parotitis).

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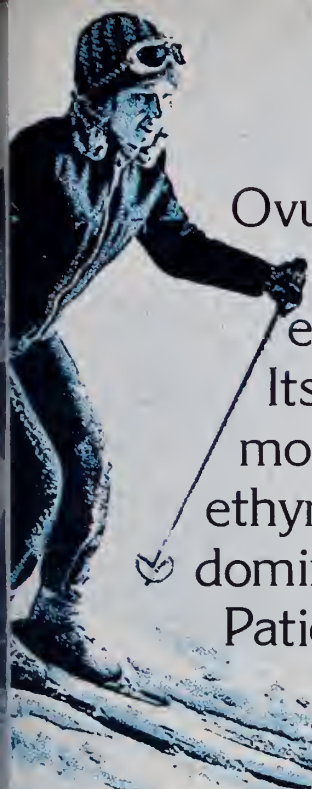
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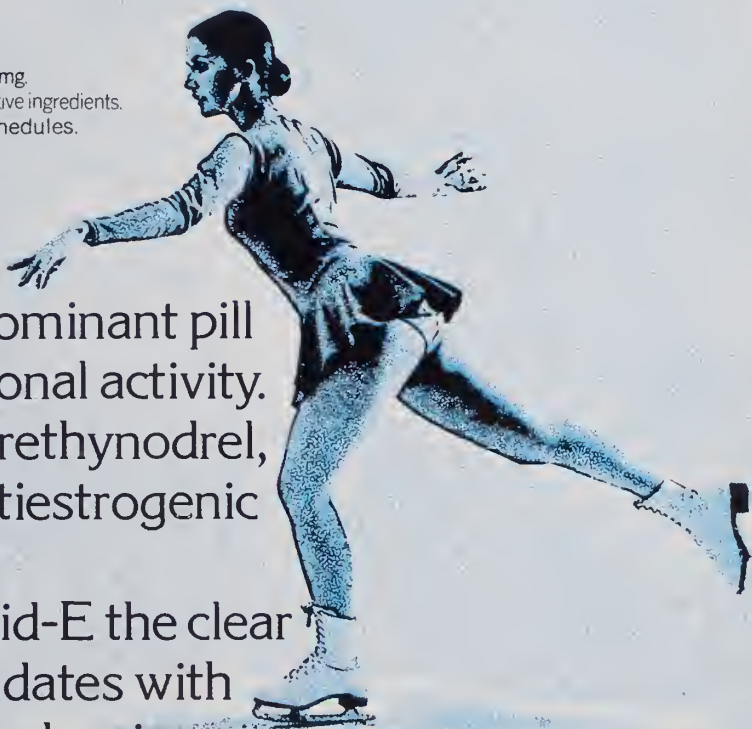
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Each pink tablet in Ovulen-28\* and Demulen-28\* is a placebo, containing no active ingredients.

**Actions**—Ovulen and Demulen act to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen and Demulen depress the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

**Special note**—Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

**Indication**—Ovulen and Demulen are indicated for oral contraception.

**Contraindications**—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

**Warnings**—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain<sup>1</sup> leading to this conclusion, and one<sup>4</sup> in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll<sup>3</sup> was about sevenfold, while Sartwell and associates<sup>4</sup> in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

**Precautions**—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations pre-existing uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and

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the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen or Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen or Demulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen or Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

**Adverse reactions observed in patients receiving oral contraceptives**—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine and decrease in T<sub>3</sub> uptake values, metyrapone test and pregnanediol determination.

**References:** 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. 13:267-279 (May) 1963. 2. Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193-199 (April 27) 1968. 3. Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. 2:651-657 (June 14) 1969. 4. Sartwell, P. E., Masi, A. T., Arthes, F. G., Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives. An Epidemiologic Case-Control Study, Amer. J. Epidemiol. 90:365-380 (Nov) 1969.

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**Actions**—Enovid-E acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Enovid-E depresses the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

**Indication**—Enovid-E is indicated for oral contraception.

The Special Note, Contraindications, Warnings, Precautions and Adverse Reactions listed above for Ovulen and Demulen are applicable to Enovid-E and should be observed when prescribing Enovid-E.

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## KNOW YOUR CONGRESSMAN

Hoyt D. Gardner, M.D., Louisville, Chairman for National Affairs of the KMA Committee on Legislative Activities, urges all physicians to become acquainted with their congressmen and points out that congressmen are interested in knowing views and opinions of their constituents.

In order to assist you in accomplishing this, you may want to remove this page and keep it for further reference.

Your congressman may be reached by writing

him in Washington at the address below. The Washington, D.C. zip code for the senators is 20510 and for the representatives is 20515.

A formal salutation (i.e., Dear Congressman Perkins) should always be used unless you are a good friend, then "Dear Carl" is permissible. In writing, the direct approach to the subject is preferred. If the action is favorable, follow up with a "thank you" letter.

## KENTUCKY'S LEGISLATORS

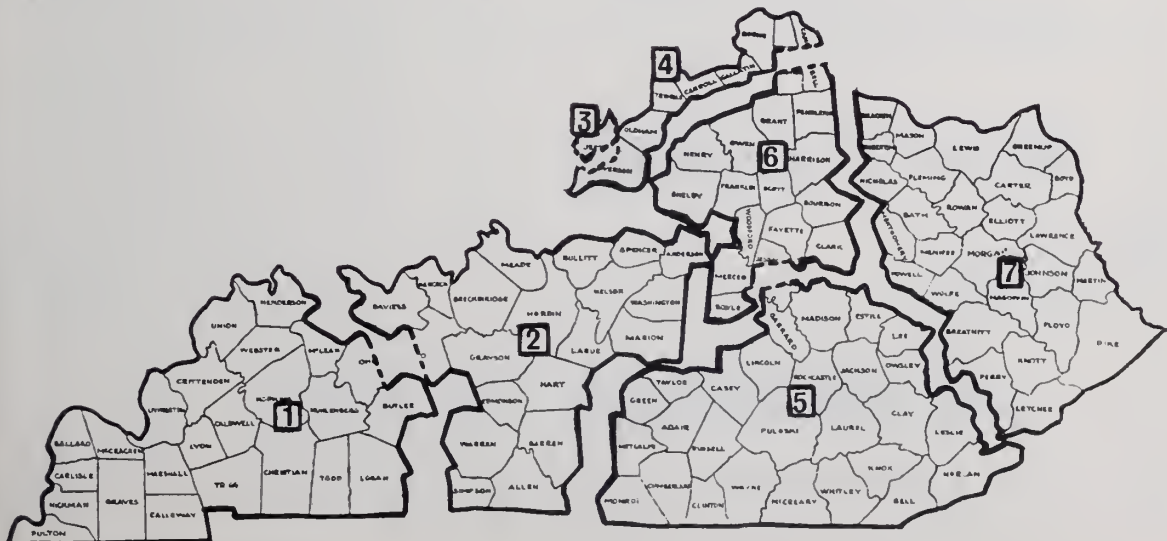
### SENATORS

Marlow W. Cook (R) Louisville	Room 347, Richard Brevard Russell Office Building (Old Senote Office Building)
Wolter "Dee" Huddleston (D) Elizabethtown	Room 6203, Everett McKinley Dirksen Office Building (New Senote Office Building)

### REPRESENTATIVES

#### District

- |   |   |  |   |
|---|---|--|---|
| 1. Frank A. Stubblefield<br>(D) Murroy          | Room 2228, Royburn House<br>Office Building   | (R) Louisville                           | Office Building                               |
| 2. William H. Natcher<br>(D) Bowling Green      | Room 2333, Rayburn House<br>Office Building   | 5. Tim Lee Corter<br>(R) Tompkinsville   | Room 1202, Longworth House<br>Office Building |
| 3. Ramano L. Mazzali<br>(D) Louisville          | Room 1017, Longworth House<br>Office Building | 6. John B. Breckinridge<br>(D) Lexington | Room 1507, Longworth House<br>Office Building |
| 4. M. Gene Snyder<br>Room 306, Cannon House Of- |   | 7. Carl D. Perkins<br>(D) Hindmon        | Room 2365, Rayburn House<br>Office Building   |



# General LEASING

CORPORATION

IS PROUD OF THE HONOR  
OF BEING CHOSEN

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Kentucky Medical  
Association

TO ADMINISTER  
THE DOCTOR'S OWN PLAN  
FOR THE LEASING OF  
CARS; MEDICAL, SURGICAL  
& LABORATORY EQUIPMENT;  
AND OFFICE FURNISHINGS

12 years experience in this field  
has qualified us to serve you well,  
and we appreciate this opportunity  
to extend our facilities.

## General Leasing

ASSOCIATED WITH KOSTER-SWOPE, INC.  
120 Bauer Ave., Louisville-St. Matthews

(502) 896-0383

### **PRESCRIBING INFORMATION** **Antiminth (pyrantel pamoate) Oral Suspension**

**Actions.** Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 µg/ml.) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

**Indications.** For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

**Warnings.** *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

**Precautions.** Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

**Adverse Reactions.** The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

**Dosage and Administration.** *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day; and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices. Because of limited data on repeated doses, no recommendations can be made.

**How Supplied.** Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles.

**ROERIG** 

A division of Pfizer Pharmaceuticals  
New York, New York 10017

# Clean Sweep



## with a single dose of Antiminth

(pyrantel pamoate) ORAL SUSPENSION

Highly effective against pinworm and roundworm

Non-staining to teeth or oral mucosa on ingestion, to stools, clothing, linen

Simple dosage with a single-dose regimen: 1 cc. per 10-lb. body weight (1 tsp./50 lb.; maximum dose, 4 tsp.)

Well-tolerated, based on clinical studies\*

Pleasant-tasting, easy-to-take, caramel-flavored oral suspension

Economical, because one prescription can treat the entire family

**ROERIG** *Pfizer*

A division of Pfizer Pharmaceuticals  
New York, New York 10017

# ANTIMINTH®

## (pyrantel pamoate)

equivalent to 50 mg. pyrantel/ml.

ORAL SUSPENSION

While Antiminth is highly effective against pinworms and roundworms, the illustration is not meant to imply 100% efficacy.

\*Data on file at Roerig.

Please see prescribing information on facing page.



## **Radiologists Hold Meeting April 12 in Lexington**

The Kentucky Chapter, American College of Radiology will hold its annual spring meeting in conjunction with the Blue Grass Radiological Society on April 12 in Lexington.

David Witten, M.D., chairman, Department of Diagnostic Radiology at the University of Alabama, will be the featured speaker. Doctor Witten will discuss "Uroradiographic Technique—Changing Methods and Changing Concepts."

The meeting will begin at 6:30 p.m. at the Continental Inn. Reservations (along with \$10.50) may be sent to Joseph G. Whelan, Jr., M.D., Secretary-Treasurer of the Chapter, 1313 St. Anthony Place, Louisville, Kentucky 40204.

## **U of K To Sponsor Symposium On Pediatric Radiology**

A Symposium on Pediatric Radiology will be held May 2-4 at the University of Kentucky College of Medicine and will deal with many practical problems in the diagnosis of abdominal, chest and skeletal disease in childhood.

The guest faculty includes David H. Baker, M.D., New York; Lawrence Davis, M.D., Louisville; John Dorst, M.D., Baltimore; Herman Grossman, M.D., Durham, N.C.; John Gwinn, M.D., Los Angeles; Herbert Kaufmann, M.D., Philadelphia; Edward Singleton, M.D., Houston, and John Tampas, M.D., Burlington, Vt. The faculty at the University of Kentucky will join the participants in presenting the conference, which is organized to meet the needs of practicing pediatricians and radiologists.

Inquiries should be directed to Frank R. Lemon, M.D., Continuing Education, College of Medicine, University of Kentucky, Lexington, Kentucky 40506.

**JAMES F. FURNISH, M.D.**  
Taylorsville  
1882-1972

James Floyd Furnish, M.D., died at the age of 90 on December 25, 1972. A general practitioner for more than 60 years in Taylorsville, Doctor Furnish was a 1908 graduate of the Kentucky School of Medicine. He was chairman of the Spencer County Board of Health and a past president of the Shelby County Medical Society.

**ORVILLE LEE BALLARD, M.D.**  
Louisville  
1896-1972

Orville Lee Ballard, Sr., M.D., 76, died December 29, 1972. Doctor Ballard was a 1923 graduate from Howard Medical College. He served as senior resident physician at Waverly Hills Tuberculosis Sanatorium for 31 years. He was a member of the Kentucky and American Medical Associations.

**PRESLEY F. MARTIN, M.D.**  
Louisville  
1924-1973

Presley F. Martin, M.D., died January 11, 1973, at the age of 48. A 1951 graduate of the University of Louisville School of Medicine, Doctor Martin was an instructor in psychiatry at the University of Louisville. He was a member of the Jefferson County Medical Society, as well as the Kentucky and American Medical Associations.

## **In Memoriam**

**CHARLES W. HARTING, M.D.**  
Kevil  
1916-1972

Charles W. Harting, M.D., died on November 3 at the age of 56. A 1941 graduate of the University of Tennessee College of Medicine, Doctor Harting practiced surgery in Memphis until he established the West McCracken County Clinic in 1952. He directed the Clinic until his retirement in 1972. Besides serving as president of the McCracken County Medical Society in 1971, Doctor Harting was a member of the Kentucky and American Medical Associations.

### **PHYSICIANS NEEDED**

Family Practitioner and General Surgeon needed for rural area of Morganfield-Sturgis, Kentucky. Modern J.C.A.H. approved hospital in community. To arrange for a visit and assistance in getting practice started contact: *E. J. Ryan, Jr., Director, Medical Relations, Hospital Corporation of America, P.O. Box 550, Nashville, Tennessee 37203.*



"For generations my family has insisted on Donnagel®-PG," says active young matron Mrs. T. Farnsworth Lipp (of the Upper Lipps), shown here with her charming son. "All the benefits of paregoric—without the unpleasant taste, don't you know? And Junior thinks Donnagel-PG tastes so much like bananas that I never worry about a slip between spoon and Lipp."

## A Matter of Taste

With or without a silver spoon, a most tasteful solution in treating acute, non-specific diarrhea: all the benefits of paregoric, without the unpleasant taste. Donnagel®-PG treats accompanying cramping, tenesmus, and nausea as well as the diarrhea itself. Instead of unpleasant-tasting paregoric, it contains the therapeutic equivalent, powdered opium, to promote the production of formed stools and lessen the urge. And it provides the emollient-detoxicant effects of kaolin and pectin, plus the antispasmodic benefits of atropine alkaloids. And a good banana flavor to baby any taste.

## Donnagel®-PG

Donnagel with paregoric equivalent

Available on oral prescription or without prescription under limited circumstances as modified by applicable state law.

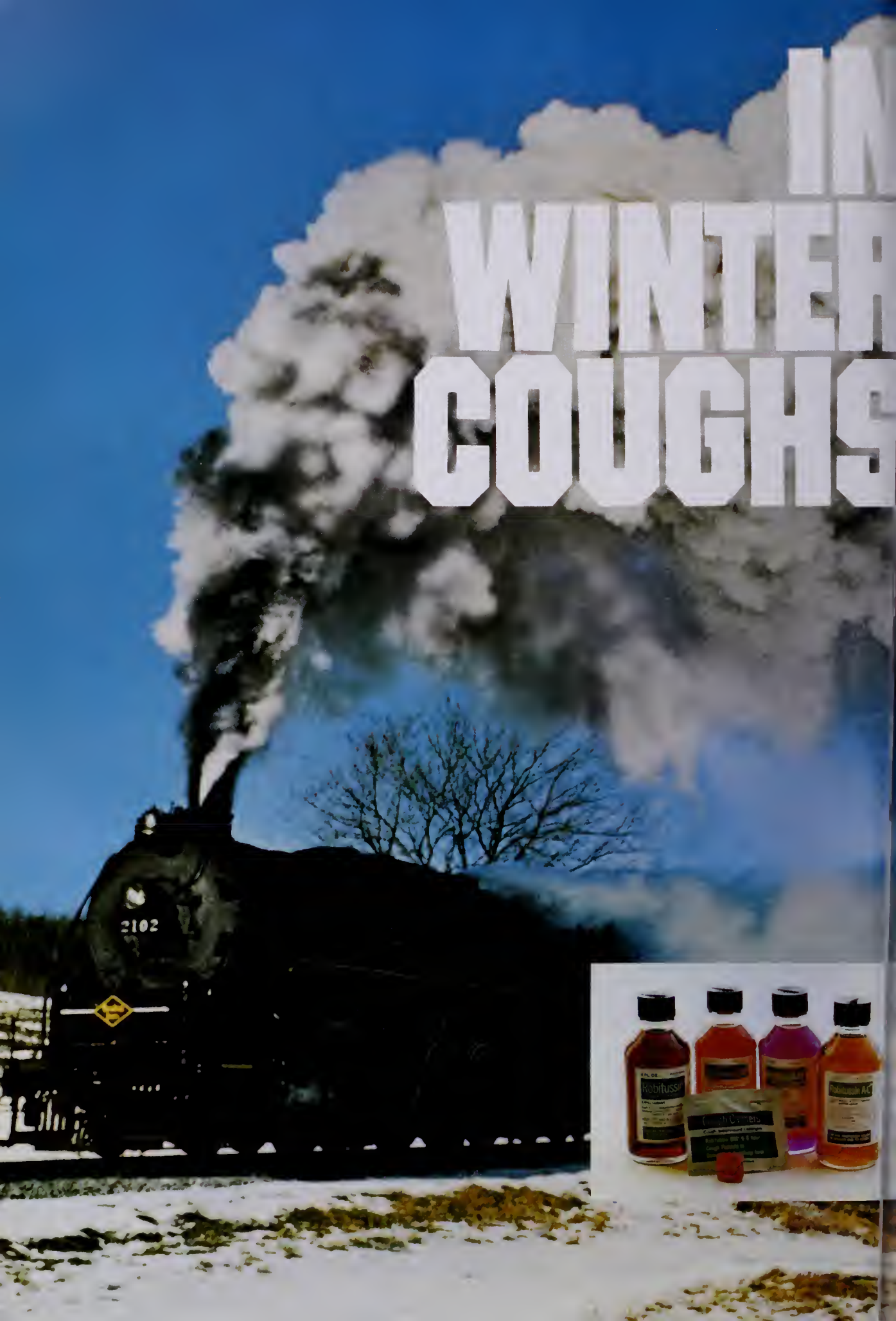
Each 30 cc. contains: Kaolin, 6.0 g.; Pectin, 142.8 mg.; Hyoscyamine sulfate, 0.1037 mg.; Atropine sulfate, 0.0194 mg.; Hyoscine hydrobromide, 0.0065 mg.; Powdered opium, USP, 24.0 mg. (equivalent to paregoric 6 ml.) (Warning: may be habit forming); Sodium benzoate (preservative), 10 mg.; Alcohol, 5%. A.H. Robins Company, Richmond, Virginia 23220

A-H-ROBINS





# IN WINTER COUGHS





# CLEAR THE TRACT WITH THE ROBITUSSIN<sup>®</sup> LINE

The coughing season is here again. Time to rely on the four Robitussins and Cough Calmers to help clear the lower respiratory tract. All contain glyceryl guaiacolate, the efficient expectorant that works systemically to help increase the output of lower respiratory tract fluid. The enhanced flow of less viscid secretions soothes the tracheobronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise. Available on your prescription or recommendation.

For coughs of colds and "flu"

## ROBITUSSIN<sup>®</sup>

Each 5 cc. contains:

Glyceryl guaiacolate ..... 100 mg.  
Alcohol, 3.5%

For unproductive allergic coughs

## ROBITUSSIN A-C<sup>®</sup>

Each 5 cc. contains:

Glyceryl guaiacolate ..... 100 mg.  
Pheniramine maleate ..... 7.5 mg.  
Codeine phosphate ..... 10.0 mg.  
(warning: may be habit forming)  
Alcohol, 3.5%

Non-narcotic for 6-8 hr. cough control

## ROBITUSSIN-DM<sup>®</sup>

Each 5 cc. contains:

Glyceryl guaiacolate ..... 100 mg.  
Dextromethorphan hydrobromide ..... 15 mg.  
Alcohol, 1.4%

Robitussin-DM in solid form for "coughs on the go"

## COUGH CALMERS<sup>®</sup>

Each Cough Calmer contains:

Glyceryl guaiacolate ..... 50 mg.  
Dextromethorphan hydrobromide ..... 7.5 mg.

Relieves cough, clears sinuses and nasal passages—  
keeps them "drip-dry" but not bone dry

## ROBITUSSIN-PE<sup>®</sup>

Each 5 cc. contains:

Glyceryl guaiacolate ..... 100 mg.  
Phenylephrine hydrochloride ..... 10 mg.  
Alcohol, 1.4%

Select the Robitussin<sup>®</sup>  
"Clear-Tract" Formulation  
that Treats Your Patient's  
Individual Coughing  
Needs:

	Expectorant- Demulcent	Cough Suppressant	Antihistamine	Long Acting (6-8 hours)	Nasal, Sinus Decongestant	Non-Narcotic
ROBITUSSIN <sup>®</sup>	●					●
ROBITUSSIN A-C <sup>®</sup>	●	●	●			
ROBITUSSIN-DM <sup>®</sup>	●	●		●		●
ROBITUSSIN-PE <sup>®</sup>	●				●	●
COUGH CALMERS <sup>®</sup>	■	■		■		■

Use this handy chart as a guide in selecting the formula that provides the benefits you want for your patient.

**A-H-ROBINS**

A. H. Robins Company, Richmond, Virginia 23220

# The Rx that says "Relax"

**BUTISOL Sodium provides highly predictable sedative effect:** minor dosage adjustments are usually all that's needed to produce the desired degree of sedation. (With 3 dosage forms and 4 strengths to make adjustments easy.)

**BUTISOL Sodium offers prompt, smooth, relatively non-cumulative action:** begins to work within 30 minutes...yet, because of its intermediate rate of metabolism, generally has neither a "roller-coaster" nor a "hangover" effect.

**BUTISOL Sodium is remarkably well tolerated:** a 30-year safety record assures you that there is little likelihood of unexpected reactions.

**BUTISOL Sodium saves your patients money:** costs less than half as much as most commonly prescribed sedative tranquilizers.\*

These are four good reasons for prescribing BUTISOL Sodium for the many patients who need to have the pace set just a little slower. Its gentle daytime sedative action is often all that's needed to help the usually well-adjusted patient cope with temporary stress.

\*Based on surveys of average daily prescription costs.

**Butisol** SODIUM  
(SODIUM BUTABARBITAL)

**Contraindications:** Porphyria, sensitivity to barbiturates, or susceptibility to dependence on sedative-hypnotics.

**Warning:** May be habit forming. **Precautions:** Exercise caution in: moderate to severe hepatic disease; withdrawal in drug dependence or the taking of excessive doses over a long period, to avoid withdrawal symptoms; elderly or debilitated patients, to avoid possible marked excitement or depression; use with alcohol or other CNS depressants because of combined effects. **Adverse Reactions:** Drowsiness at daytime sedative dose levels, skin rashes, "hangover" and gastrointestinal disturbances are seldom seen. **Usual Adult Dosage:** For daytime sedation, 15 mg. to 30 mg. t.i.d. or q.i.d. For hypnosis, 50 mg. to 100 mg. **Available as:** Tablets, 15 mg., 30 mg., 50 mg., 100 mg.; Elixir, 30 mg. per 5 cc. (alcohol 7%). BUTICAPS® [Capsules BUTISOL SODIUM (sodium butabarbital)] 15 mg., 30 mg., 50 mg., 100 mg.

**McNEIL**

McNeil Laboratories, Inc., Fort Washington, Pa. 19034

# Encounter under the Scanning Electron Microscope

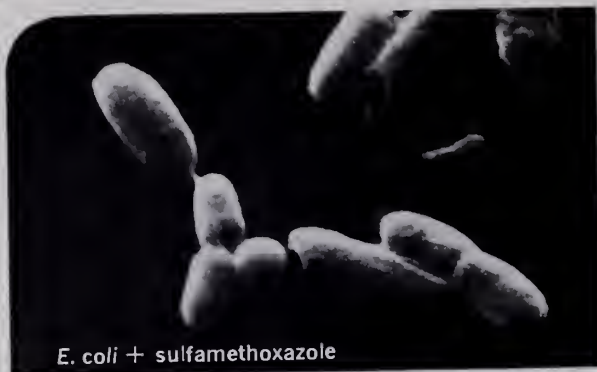


## SEM reveals changes in *E. coli* exposed to antibacterial agents

The Scanning Electron Microscope (SEM) is the only instrument which gives 3-dimensional views on a microscopic level. This permits the surface morphology of microorganisms to be observed in

detailed perspective. Changes in surface morphology of *E. coli* exposed to various antimicrobial agents are seen on the following page. An SEM photomicrograph of normal control *E. coli* appears above.

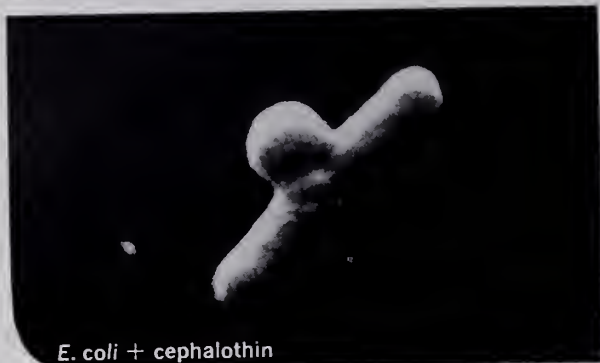




*E. coli* + sulfamethoxazole



*E. coli* + tetracycline



*E. coli* + cephalothin



*E. coli* + ampicillin

## Different modes of antibacterial action — Similar changes in morphology

As part of a series of experiments,<sup>1-3</sup> strains of *E. coli* proven susceptible to each antibacterial agent were exposed to 1 MIC of the respective antibacterials for a three-hour period. Included were cell-wall-active drugs, ampicillin and cephalothin; a drug interfering with intracellular protein synthesis, tetracycline; and a chemical agent which acts by interference with para-aminobenzoic acid, sulfamethoxazole.

As seen above, elongation of the bacilli, mid-cell defects and spheroplast-like forms may be appreciated with the SEM technique. These changes in bacterial morphology were similar... regardless of the antibacterial agent used and irrespective of

its mechanism of action.

"At present, the significance of these observations in clinical infection must be considered with caution, but it is hoped that these data will stimulate a reevaluation of present concepts of the nature and role of morphological variants of bacteria exposed to a variety of antibacterial factors."<sup>2</sup>

It should be noted that no clinical conclusions can be drawn from this study, as it is not always possible to extrapolate *in vitro* data to humans.

**References:** 1. Klainer, A. S.; Fass, R. J., and Perkins, R. L.: Scientific Exhibit presented at the 25th American Medical Association Clinical Convention, New Orleans, La., Nov. 28-Dec. 1, 1971. 2. Klainer, A. S., and Perkins, R. L.: *Antimicrob. Agents Chemother.*, 1:164, 1972. 3. Klainer, A. S.: Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media.** The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

**Contraindications:** Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

**Warnings:** Safety during pregnancy has not been estab-

lished. Sulfonamides should not be used for group A beta hemolytic streptococcal infections and will not eradicate prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent C and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom drug-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

**Adverse Reactions:** Blood dyscrasias (agranulocytosis,

# Encounter in Clinical Practice

## Control of primary bacterial offenders

Antibacterial Gantanol® (sulfamethoxazole) controls susceptible strains of *E. coli* and other gram-negative and gram-positive organisms

often implicated in acute nonobstructed pyelonephritis and cystitis.

## Prompt antibacterial blood and urine levels

In from 2 to 3 hours after the initial 2-Gm adult dose, antibacterial levels are present in

both the blood and urine.

## B.I.D./T.I.D. dosage for around-the-clock coverage

Subsequent 1-Gm doses provide up to 12 hours of antibacterial coverage. More severe u.t.i. may require a q. 8 h. dosage regimen. Either schedule provides coverage during the waking

and sleeping hours—especially important during hours of sleep when normal urinary retention tends to favor bacterial proliferation.

## Also effective in nonobstructed chronic and recurrent u.t.i.

It is not uncommon for the elderly and the debilitated to develop chronic and/or recurrent nonobstructed urinary tract infections such as pyelonephritis and cystitis. Such cases often re-

spond satisfactorily to Gantanol. The increasing frequency of resistant organisms is a limitation of usefulness of antibacterial agents including sulfonamides, especially in chronic or recurrent u.t.i.

## Your Option: Tablets or Suspension

Either dosage form—the Tablets or the pleasant-tasting, cherry-flavored Suspension—can provide the dependable antibacterial activity necessary to control susceptible nonobstructed cystitis and pyelonephritis. Symptomatic improvement may usually be expected in 24 to 48 hours. The usual precautions with sulfonamide

therapy should be observed, including adequate fluid intake. Gantanol (sulfamethoxazole) is generally well tolerated with relative freedom from complications; the most common side effects are nausea, vomiting and diarrhea. Frequent c.b.c.'s and urinalyses with microscopic examination are recommended.

**In nonobstructed cystitis and pyelonephritis due to susceptible organisms**

**Gantanol®**  
(sulfamethoxazole)  
**Basic Therapy**

plastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thy-

roid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

**Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age** (except adjunctively with pyrimethamine in congenital toxoplasmosis).

*Usual adult dosage:* 2 Gm (4 tabs or teasp.) initially, then 1 Gm b.i.d. or t.i.d. depending on severity of infection.

*Usual child's dosage:* 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs b.i.d. Maximum dose should not exceed 75 mg/kg/24 hrs.

**Supplied:** Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110



# What it means to live and work in Tipton County, Tennessee

**Persons who are white and  
over 40 have one chance in four  
of having solar keratoses...  
which may be premalignant**

An epidemiologic study\* conducted in Tipton County, Tennessee, revealed that 28.5% of white persons over 40 had solar keratoses; most had multiple lesions. Cluster sampling projected an estimated prevalence of 32.5% for white males and 19.5% for white females.

Though this is an unusually high percentage of affected persons, these lesions can occur in any white population, wherever people work or play out of doors.

**Prevalence of solar keratoses in white persons  
over 40 in Tipton County, Tennessee**

Female	159	44
Male	117	66



Persons without solar keratoses



Persons with solar keratoses

\*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.





## Solar, actinic, senile keratoses

Called by many names, the typical lesion is flat or slightly elevated, brownish or reddish in color, papular, dry, adherent, rough, sharply defined; usually multiple lesions, chiefly on exposed portions of the skin.

## Sequence/selectivity of response

Erythema in areas of lesions may begin after several days of therapy; height of reaction (only in affected areas)\* usually occurs within two weeks, declining after discontinuation of therapy. Since this response is so predictable, lesions that do not respond should be biopsied to rule out the presence of a frank neoplasm.

## Cosmetic results

Cosmetic results are highly favorable. Incidence of scarring is low—important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.

## 5% cream—a Roche exclusive

Only Roche formulates the 5% cream... high in patient acceptability... high in clinical efficacy, especially for lesions of hands and forearms... economical.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Multiple actinic or solar keratoses.

**Contraindications:** Patients with known hypersensitivity to any of its components.

**Warnings:** If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

**Precautions:** If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

**Adverse Reactions:** Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

**Dosage and Administration:** Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

**How Supplied:** Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)amino-methane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

# an alternative to conventional therapy **Efudex<sup>®</sup>** (fluorouracil) cream/solution



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110



# IN ASTHMA IN EMPHYSEMA



*optional  
therapy*



# THE mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications** are listed above. **MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with  $\frac{1}{2}$  to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

## **MUDRANE—original formula**

*First choice*

## **MUDRANE-2**

*When ephedrine is too exciting  
or is contraindicated*

## **MUDRANE GG**

*During pregnancy or when K.I. is  
contraindicated or not tolerated*

## **MUDRANE GG-2**

*A counterpart for Mudrane-2*

## **MUDRANE GG ELIXIR**

*For pediatric use  
or where liquids are preferred*

*Clinical specimens  
available to physicians.*

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

*Manufacturers of Ethical Pharmaceuticals*



*"The history of science, and in particular the history of medicine... is... the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."*

*—George Sarton, from "The History of Medicine Versus the History of Art"*

**Are combination drug  
products useful in treatment  
involving concomitant use  
of two or more drugs?**

**Opinion**

**Results of a questionnaire to  
7,000 physicians:**

**62.9%**

**Believe combination drug  
products are useful.**

**13.8%**

**Do not believe combination drug  
products are useful.**

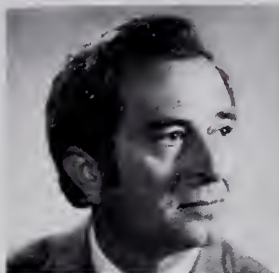


# Are combination drug products useful in treatment involving concomitant use of two or more drugs

## Opinion & Dialogue

### Doctor of Medicine

Louis Lasagna, M.D.  
Professor and Chairman  
Department of  
Pharmacology & Toxicology  
University of Rochester  
School of Medicine  
and Dentistry



Obviously, many drugs are given concomitantly. Whether it makes sense to combine medications in one preparation, be it capsule, tablet, or liquid, is a question that can be answered only by examining the advantages and disadvantages in the individual case.

Among the advantages is, first of all, convenience. The more medications that are taken concurrently and the more complicated the directions, the less likely the patient is to take medications accurately. From the standpoint of convenience and accuracy, and economy as well, you can make an important case for putting medications together in one preparation, as long as they are compatible.

By the same token, when you prescribe a properly tested and rational combination, you should have less worry about pharmaceutical or pharmacological compatibility — and about reasonable dosage ratios as well. Compatibility of the formulation should be demonstrated in the laboratory and clinic before the product is available for prescription—which is more than can usually be said for

the physician's own spontaneous creations. And, the dosage ratios employed in rational precompounded combinations are designed to meet the needs of "typical" patients.

There is no doubt that many "atypical" patients are to be found, and for them the prefabricated combination must be rejected. But that hardly argues for eliminating rational combinations from the market. Think, for example, of the problems that would arise if the components of widely accepted combinations, like the oral contraceptives and the diuretic-antihypertensives, always had to be prescribed, purchased and ingested separately.

One disadvantage that comes to mind is some doctors' unawareness of the ingredients a given combination contains. For example, a doctor might know that a patient is allergic to aspirin but forget that a certain analgesic mixture, which he knows only by its trade name, contains aspirin. His prescription, then, causes considerable discomfort, to say the least. This problem is a function of physician education, rather than of combination therapy as such. Improving doctors' knowledge about all medicaments they prescribe is a problem that deserves tackling on its own.

Another accusation leveled at combination drugs is that they encourage sloppiness of diagnosis and treatment. In many cases, however, a combination may prove to be the most effective choice. A good ex-

ample of the usefulness of combinations appears in a recent article in the *Journal of Chronic Diseases* on the efficacy and side effects of an antihypertensive containing three ingredients, in which the track records of the combination drug and the individual ingredients were compared. Interestingly enough, whether the drugs were given individually or together, incidence and severity of side effects were the same. But blood pressure control was invariably better when the drugs were taken in one combination tablet than when they were taken separately (in "titratable" dosage) or in two or three different tablets.

Deciding which combinations constitute rational therapy obviously leads to a discussion of who is to determine which should be used and which should not. Realistically, I think combinations should be evaluated somewhat differently if they are old and established or new and untried.

In today's regulatory atmosphere, there is no possibility of a new combination being put on the market without a substantial amount of acceptable evidence in the form of controlled trials that show it to be safe and efficacious. On the other hand, I believe a different set of standards should apply to combination preparations that have been around for a long time. In other words, physician acceptance over a long period should be given some weight as evidence of the efficacy and safety of these drugs.

The FDA, however, does not seem to share this attitude. It often requires, for these older products, controlled trials that will monopolize the time of already overtired investiga-

tors and cost a great deal of money. I wish we could agree on a "grandfather clause" approach to preparations that have been in for a number of years that have an apparently satisfactory track record.

For example, I think some of the antibiotic combinations that were taken off the market by the FDA performed quite well. I'm thinking particularly of penicillin-streptomycin combinations that patients—especially surgical patients—were given in injection. This made less discomfort for the patient, less demand on nurses' time, and fewer opportunities for dosing errors. To take such preparation off the market doesn't seem to be good medicine, unless actual usage showed a great deal of harm from the injection (rather than the pill use) of the combination.

The point that should be emphasized is that there are both rational and irrational combinations. The real question is, who is to determine which is which? Obviously, the FDA plays a major role in making this determination. In fact, I don't think it is wise to avoid taking the ultimate responsibility, but it is wise to enlist the help of other physicians and experts in assessing the evidence and in making the ultimate decision.

# Maker of Medicine

W. Clarke Wescoe, M.D.  
President  
Winthrop Laboratories



If two medications are used effectively to treat a certain condition, and it is known that they are compatible, it clearly is useful and convenient to provide them in one dosage form. It would make no sense, in fact it would be pedantic, to insist they always be described separately. To avoid the appearance of dandyism, the "expert" decries the combination because it is a fixed dosage form. When the "expert" invokes the concept of fixed dosage form he obscures the fact that single-ingredient pharmaceutical preparations are also fixed dosage forms. By a singular nomenclature exercise he imposes a pejorative meaning on the term "fixed dose" only when he uses it with respect to combinations. What is ignored is the simple fact that only in the best of circumstances does any physician attempt to titrate an exact therapeutic response in his patient. It is quite possible at some aches and pains will respond to 500 mg. of aspirin yet that fact does not militate against the usefulness of a 650 mg. dose. The other semantic play often called into play is to describe a combination product as rational or irrational. Take antibiotic mixtures, a source of much of the criticism generated against

combinations generally. Obviously, no one should be exposed willy-nilly to the potential side effects of two or three antibiotics when only one is needed. At the same time there are cases where it is prudent to prescribe more than one. The clinician is the judge in these circumstances, as he should be.

There is no clear definition of the word rational. Most persons, I suppose, would find it synonymous with reasonable, but in many circumstances it may best be defined as the opinion of those in power at the moment.

Other factors govern combination therapy, not the least of which has been its broad use by practicing physicians anxious to achieve convenience in prescribing, to reduce medication error, and to save money for their patients. Combinations clearly have met the test on all three counts.

I have been impressed by studies showing that the rate of error climbs markedly with the number of medications to be taken, even with sophisticated patients. When medically justified, therefore, this factor alone supports the logic of combination therapy.

The cost argument for combinations appears to be irrefutable. In 1971, R. A. Gosselin studied the 71 combination products (excluding oral contraceptives) among the 200 most prescribed drugs. The study found that if all 71 products were discontinued, and if each ingredient in these combinations were prescribed separately, the price of medicines to patients would jump by \$443.2 million on a national basis! At a time when the cost of medical care is under so much fire, it would be nonsensical to boost costs without clearly irre-

futable medical reasons.

The part played by government on this question, of course, is fundamental. The FDA should play a role in determining which combinations are reasonable. That role, as defined by law and regulation, is to ensure that any medication on the market is safe and effective in line with its label claims. Certainly combinations are entitled to as much consideration as single entities—neither more nor less. So long as the addition of one drug to another does not make either less safe, or less effective, so long as they are compatible in a formulation, we have a reasonable product. It makes no sense to recommend the use of two products for certain conditions and to deny their being combined in a single form. An unhappy side effect of the problem concerns the efficacy panel discussions of many products submitted for review. The term "effective, but" has been freely interpreted to mean "ineffective" in toto, regardless of the merit of the individual drugs. This interpretation has placed numerous useful combination products in needless jeopardy.

In reading the actual reports of the review panels, it seems clear that some of the ratings were based less on scientific research and clinical observation than on the "informed" opinions of the panelists. These "informed" opinions were accepted at face value, while

the "informed" opinions of others who had used the products were rejected. All of this put combination products into a sort of scientific never-never land.

It should be kept in mind by all, government as well as others involved in our health care system, that advances in therapy are seldom made in leaps and bounds but rather by small painstaking steps—and that some of these steps have resulted from research in combination drugs as well as with single entities. Given the near-infinite biologic variation in patient response, this is hardly surprising to clinicians. It should not be to regulatory agencies either.

In the end, the practicing physician is in the best position to decide if a particular combination makes sense. Such a decision should not be made exclusively by those whose responsibility for continuing clinical care is limited. Clinicians are the best judges of efficacy because the ultimate proof of any product's effectiveness is acceptance by physicians who have observed its actions in patients over time. The corollary statement may be made about over-the-counter medicines, which would not long survive if they failed to afford the relief the user anticipates. That the antihistamine in a "cold" remedy may not *always* be necessary is no reason to proscribe the combination generally.

## Opinion & Dialogue

What is your opinion, doctor?

We would welcome your comments.



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## MINOCIN® made the difference in just eight days.\*

### Clinical Data:

**Patient:** 47-year-old male.

**Diagnosis:** Severe pyoderma, left hand.

**Culture:** *Staphylococcus aureus*, coagulase positive and sensitive to MINOCIN.

**Temperature:** 102° F

**Therapy:** MINOCIN Minocycline HCl Capsules, 100 mg: 200 mg *stat*, 100 mg every 12 hours. Medication began 9/7/71. By fourth day, temperature was normal and pustular lesions considerably improved. Last dose taken 9/14/71.

**Concomitant therapy:** None.†



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**MINOCIN®**  
**MINOCYCLINE HCl**

Capsules, 100 mg: 2 *stat*, 1 q 12 h.

**Indications:** For the treatment of susceptible infections; e.g., *E. coli*, *D. pneumoniae*. For full list of approved indications consult labeling.

**Contraindications:** Hypersensitivity to any tetracycline.

**Warnings:** The use of tetracyclines during tooth development (last half of pregnancy, infancy and childhood to the age of 8 years) may cause permanent discoloration of the teeth (yellow-gray-brown). This is more common during long-term use but has been observed following repeated short-term courses. Enamel hypoplasia has also been reported. Tetracyclines, therefore, should not be used in this age group unless other drugs are not likely to be effective or are contraindicated. In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, use lower total doses, and, in prolonged therapy, determine serum levels. Photosensitivity manifested by an exaggerated sunburn reaction has also been observed in some individuals taking tetracyclines. Advise patients apt to be exposed to direct sunlight or ultraviolet light that such reaction can occur, and discontinue treatment at first evidence of skin erythema. Studies to date indicate that photosensitivity does not occur with MINOCIN Minocycline HCl. In patients with significantly impaired renal function, the antianabolic action of tetracycline may cause an increase in BUN, leading to azotemia, hyperphosphatemia, and acidosis. CNS side effects (lightheadedness, dizziness, vertigo) have been reported, may disappear during therapy, and always disappear rapidly when drug is discontinued. Caution patients who experience these symptoms about driving vehicles or using hazardous machinery while taking this drug.

**Pregnancy:** In animal studies, tetracyclines cross the placenta, are found in fetal tissues, and can have toxic effects on the developing fetus (often related to retardation of skeletal development). Embryotoxicity has been noted in animals treated early in pregnancy. Safety of use during human pregnancy has not been established. **Newborns, infants and children:** All tetracyclines form a stable calcium complex in any bone-forming tissue. Prematures, given oral doses of 25 mg./kg. every 6 hours, demonstrated a decrease

in fibula growth rate, reversible when drug was discontinued. Tetracyclines are present in the milk of lactating women who are taking a drug of this class.

**Precautions:** Use may result in overgrowth of nonsusceptible organisms, including fungi. If superinfection occurs, institute appropriate therapy. In venereal diseases when coexistent syphilis is suspected, darkfield examination should be done before treatment is started and blood serology repeated monthly for at least four months. Because tetracyclines have been shown to depress plasma prothrombin activity, patients on anticoagulant therapy may require downward adjustment of such dosage. Test for organ system dysfunction (e.g., renal, hepatic and hemopoietic) in long-term use. Treat all Group A beta hemolytic streptococcal infections for at least 10 days. Avoid giving tetracycline in conjunction with penicillin.

**Adverse Reaction:** GI: (with both oral and parenteral use): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in anogenital region. **Skin:** maculopapular and erythematous rashes. Exfoliative dermatitis (uncommon). Photosensitivity is discussed above ("Warnings"). **Renal toxicity:** rise in BUN, dose-related (see "Warnings"). **Hypersensitivity reactions:** urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus. In young infants, bulging fontanelles have been reported following full therapeutic dosage, disappearing rapidly when drug was discontinued. **Blood:** hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia. **CNS:** (see "Warnings.") When given in high doses, tetracyclines may produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

**NOTE: Concomitant therapy:** Antacids containing aluminum, calcium, or magnesium impair absorption; do not give to patients taking oral minocycline. Studies to date indicate that absorption of MINOCIN is not notably influenced by foods and dairy products.

\*Indicated in infections due to susceptible organisms. Culture and sensitivity testing recommended. Tetracyclines are not the drugs of choice in the treatment of any staphylococcal infection.

†Case Report, Clinical Investigation Department, Lederle Laboratories.



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**DBI-TD<sup>®</sup> Geigy**  
**phenformin HCl**

lowers blood sugar without raising blood insulin.

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**Tablets of 25 mg.**

**DBI-TD<sup>®</sup> phenformin HCl**  
**Timed-Disintegration**

**Capsules of 50 and 100 mg.**

**Indications:** Stable adult diabetes mellitus; sulfonylurea failures, primary and secondary; adjunct to insulin therapy of unstable diabetes mellitus.

**Contraindications:** Diabetes mellitus that can be regulated by diet alone; juvenile diabetes mellitus that is uncomplicated and well regulated on insulin; acute complications of diabetes mellitus (metabolic acidosis, coma, infection, gangrene); during or immediately after surgery where insulin is indispensable; severe hepatic disease; renal disease with uremia; cardiovascular collapse (shock); after disease states associated with hypoxemia.

**Warnings:** Use during pregnancy is to be avoided.

**Precautions:** 1. *Starvation Ketosis:* This must be differentiated from "insulin lack" ketosis and is characterized by ketonuria which, in spite of relatively normal blood and urine sugar, may result from excessive phenformin therapy, excessive insulin reduction, or insufficient carbohydrate intake. Adjust insulin dosage, lower phenformin dosage, or supply carbohydrates to alleviate this state.

**Do not give insulin without first checking blood and urine sugar.** 2. *Lactic Acidosis:* This drug is not recommended in the presence of azotemia or in any clinical situation that predisposes to sustained hypotension that could lead to lactic acidosis. To differentiate lactic acidosis from ketoacidosis, periodic

determinations of ketones in the blood and urine should be made in diabetics previously stabilized on phenformin, or phenformin and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH, and the lactate-pyruvate ratio. The drug should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis.

3. *Hypoglycemia:* Although hypoglycemic reactions are rare when phenformin is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with phenformin.

**Adverse Reactions:** Principally

gastrointestinal; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, the drug should be immediately withdrawn. Although rare, urticaria has been reported, as have gastrointestinal symptoms such as anorexia, nausea and vomiting following excessive alcohol intake. (B) 98-146-103-D (6/72)

For complete details, including dosage, please see full prescribing information.

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**Placidyl®**  
(ETHCHLORVYNOL)

## Summary

**Indications**—Placidyl (ethchlorvynol) is indicated for short-term hypnotic therapy in the management of insomnia.

**Contraindications**—Drug hypersensitivity and porphyria.

**Warnings**—Not recommended during the first and second trimester of pregnancy. Caution patients against the possible combined exaggerated effects with barbiturates, tranquilizers or other CNS depressants. Exaggerated effects might result in respiratory depression, paralysis of accommodation and blurred vision, paralysis of accommodation and hypnosis. Caution patients concerning operation of a motor vehicle, operating machinery, or performing hazardous operations requiring alertness after taking the drug. Administer with caution to patients with suicidal tendencies and do not prescribe large quantities of the drug. Adjustment of dosage of oral anticoagulants might be necessary at the beginning of ethchlorvynol therapy, during or after stopping therapy. This drug is contraindicated for use in children. PLACIDYL HAS THE POTENTIAL FOR THE DEVELOPMENT OF PSYCHOLOGICAL AND PHYSICAL DEPENDENCE. INSTANCES OF SEVERE WITHDRAWAL REACTIONS, INCLUDING CONVULSIONS AND DELIRIUM, CLINICALLY SIMILAR TO THOSE SEEN WITH BARBITURATES, HAVE BEEN REPORTED IN PATIENTS TAKING REGULAR DOSES AS LOW AS 10 MG. PER DAY OVER A PERIOD OF SEVERAL WEEKS WHEN THE DRUG WAS SUDDENLY DISCONTINUED. PROLONGED ADMINISTRATION OF PLACIDYL IS NOT RECOMMENDED. Addiction-prone patients or those who are likely to increase their use of the drug on their own initiative should be observed for evidence of signs or symptoms that may indicate possible early withdrawal or rebound symptoms. Signs and symptoms associated with withdrawal and abstinence include anxiety, tremor, ataxia, slurring of speech, loss of appetite, perceptual distortions, irritability, and delirium. Other less well defined withdrawal symptoms, not necessarily due to withdrawal and abstinence, may include anorexia, nausea, vomiting, weakness, dizziness, sweating, twitching and weight loss. Abrupt discontinuation of Placidyl following prolonged overdosage may result in convulsions and delirium.

**Precautions**—Toxic amblyopia has been reported with long-term continuous use of ethchlorvynol. No visual defects have been observed, although amblyopia has improved after discontinuation of the drug. Drug dosage should be limited to the minimum and debilitated patients to the smallest effective amount. If pain is present, this drug should only be given if insomnia persists after being controlled with analgesics. Caution is advised in prescribing the drug for patients who are treated with either MAO inhibitors or anti-depressants. Transient delirium has been reported with combination of Placidyl and amitriptyline. Dosage should be reduced if prescribed for patients receiving MAO inhibitors or antidepressants. Caution should be exercised in patients with impaired hepatic or renal function. Patients should be warned unpredictably to barbiturates or alcohol exhibit excitement and release of inhibition associated with such agents, may also occur in this way to Placidyl. Rarely, patients may experience symptoms suggestive of an unusual sensitivity to the drug; such as prolonged hypnosis, muscular weakness, excitement, hysteria, and hypotension without marked hypotension. Transient dizziness or ataxia may occur.

**Adverse Reactions**—Hypotension, nausea or vomiting, gastric upset, aftertaste, blurring of vision, drowsiness, facial numbness, and allergic reaction such as urticaria have been reported following administration. Mild "hangover" and symptoms of mild excitation have occurred in some patients. There have been rare reports of cholestatic jaundice occurring in patients taking ethchlorvynol. Cases of thrombocytopenia have been reported in patients receiving ethchlorvynol. 302430



## Give us her nights.

Prescribe Placidyl. Chances are, we'll give her a good night's sleep.

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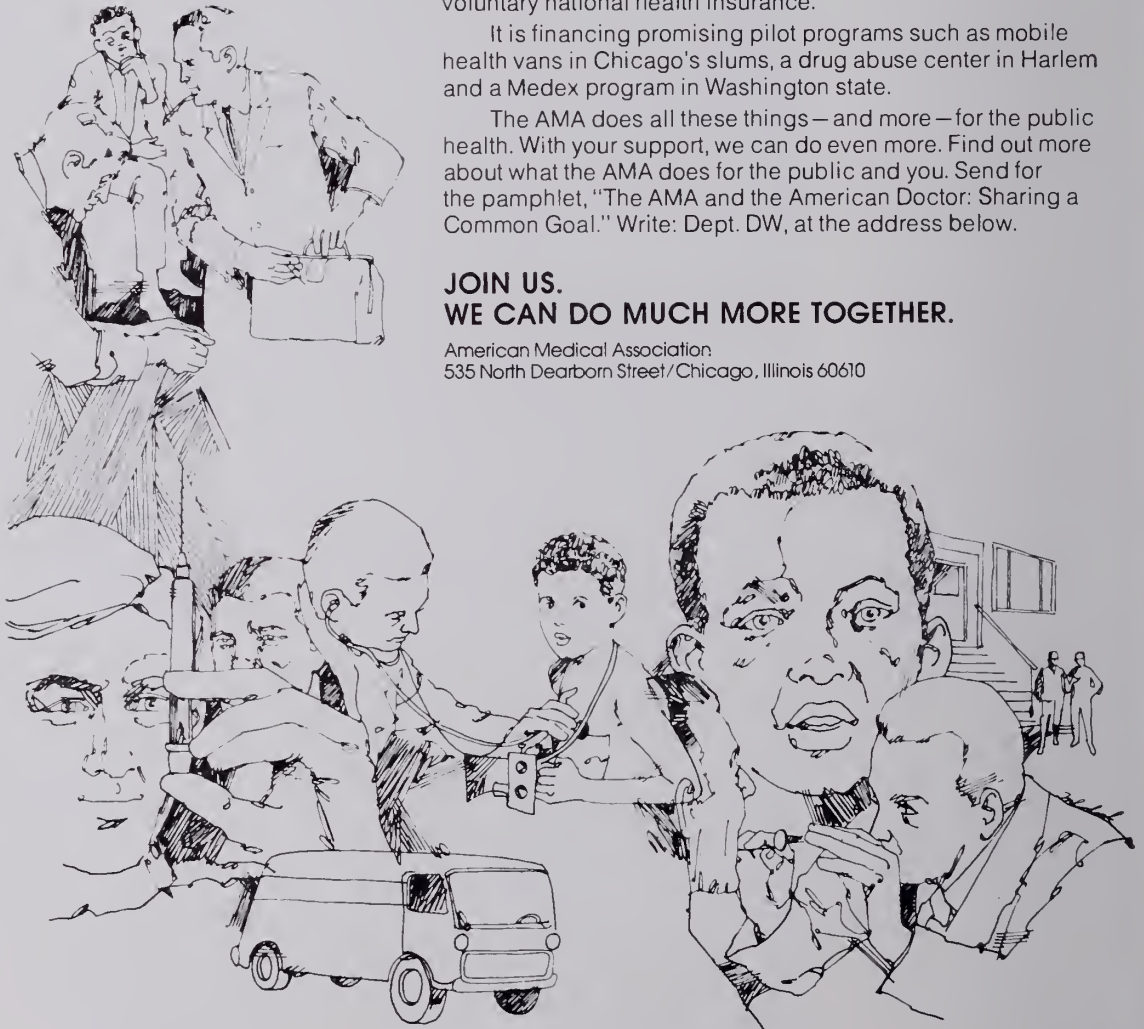
In Washington, the AMA has lobbied successfully for more doctors, maternal and child programs, anti-pollution laws, voluntary national health insurance.

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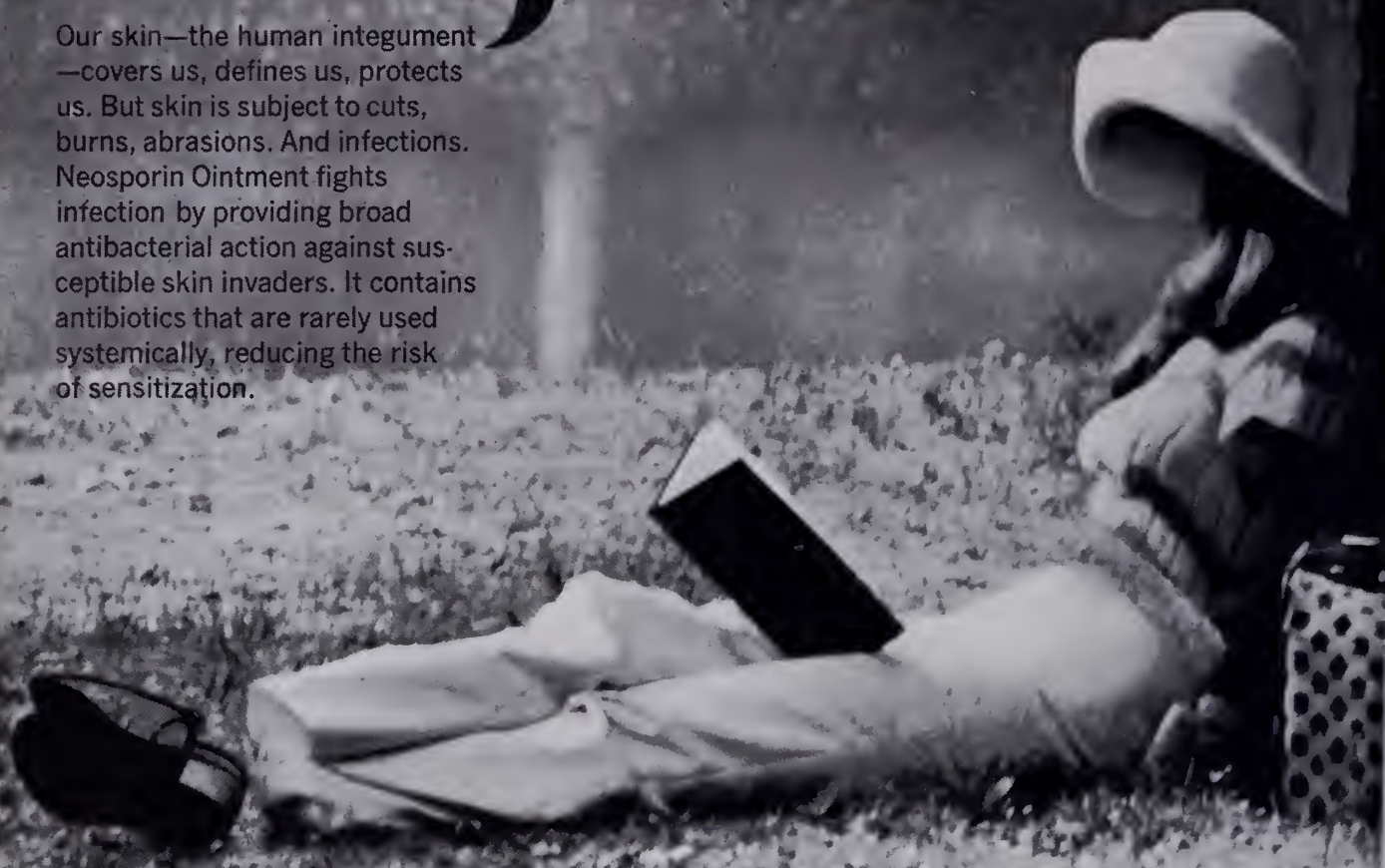
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**INDICATIONS:** Therapeutically, used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in:

- infected burns, skin grafts, surgical incisions, otitis externa
- primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia)
- secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis)
- traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

**CONTRAINDICATIONS:** Not for use in the external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

**PRECAUTION:** As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Complete literature available on request from Professional Services Dept. PML.

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**March 21 and 22, 1973**



**STOUFFER'S LOUISVILLE INN — LOUISVILLE, KENTUCKY**

**Wednesday, March 21, 1973**  
**9:00 a.m.**

*"The Anatomy of Coronary Artery Disease"*

WILLIAM C. ROBERTS, M.D., Chief, Section of Pathology, National Institutes of Health, Bethesda, Maryland

*"Clinical Pattern of Angina Pectoris and Its Variants"*

HENRY D. MCINTOSH, M.D., The Bob and Vivian Smith Professor, and Chief of Medical Service, Methodist Hospital, and Chairman, Department of Medicine, Baylor College of Medicine, Houston, Texas

*"Lipid Metabolism and its Role in Coronary Atherosclerosis and Disease Reversibility"*

WILLIAM E. CONNOR, M.D., Professor, Department of Internal Medicine and Director, Clinical Research Center, University of Iowa School of Medicine, Iowa City, Iowa

*"Coronary Artery Disease and Cardiac Arrhythmia"*  
BORYS SURAWICZ, M.D., Professor of Medicine and Director, Cardiovascular Division, University of Kentucky College of Medicine, Lexington, Kentucky

*"Medical Therapy of Angina Pectoris"*  
HENRY D. MCINTOSH, M.D.

*"Surgery of Coronary Artery Disease"*  
HERBERT E. GRISWOLD, M.D., Professor of Medicine and Head, Division of Cardiology, University of Oregon Medical School, Portland, Oregon

*"Newer Thoughts on Non-Rheumatic Mitral Valve Disease"*  
WILLIAM C. ROBERTS, M.D.

**PANEL DISCUSSION**

F. ALBERT OLASH, M.D., Moderator

**Thursday, March 22, 1973**  
**8:30 - 9:30 a.m.**

*"GRAND ROUNDS"*

University of Louisville Health Sciences Center Auditorium

*"Natural History of Patients with Prosthetic Valves"*  
HEREERT E. GRISWOLD, M.D., Conducting

**10:00 a.m. —**  
**Stouffer's Louisville Inn**

*"Concepts of Pharmacologic Therapy for the Early Phase of Acute Myocardial Infarction"*

STEPHEN E. EPSTEIN, M.D., Chief, Cardiology Branch, National Heart and Lung Institute, National Institutes of Health, Bethesda, Maryland

*"The Effect of Cardiovascular Drugs on the Electrical Properties of the Heart"*  
BORYS SURAWICZ, M.D.

**THE BERNARD D. ROSENBLUM MEMORIAL LECTURE**

*"Management of the Acute Phase of Myocardial Infarction"*

PAUL N. YU, M.D., President, American Heart Association, Sarah McCort Ward Professor of Medicine, University of Rochester School of Medicine and Dentistry; Head, Cardiology Unit, University of Rochester Medical Center, Rochester, New York

*"Circulatory Effects of Exercise in Patients with Coronary Artery Disease and Modification by Therapy"*

STEPHEN E. EPSTEIN, M.D.

**PANEL DISCUSSION**

HENRY W. POST, M.D., Moderator

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**Indications:** Relief of anxiety and tension occurring alone or accompanying various disease states.

**Contraindications:** Patients with known hypersensitivity to the drug.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

**Precautions:** In the elderly and debili-

tated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or over-sedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

**Adverse Reactions:** Drowsiness, ataxia and confusion may occur, especially in the

elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

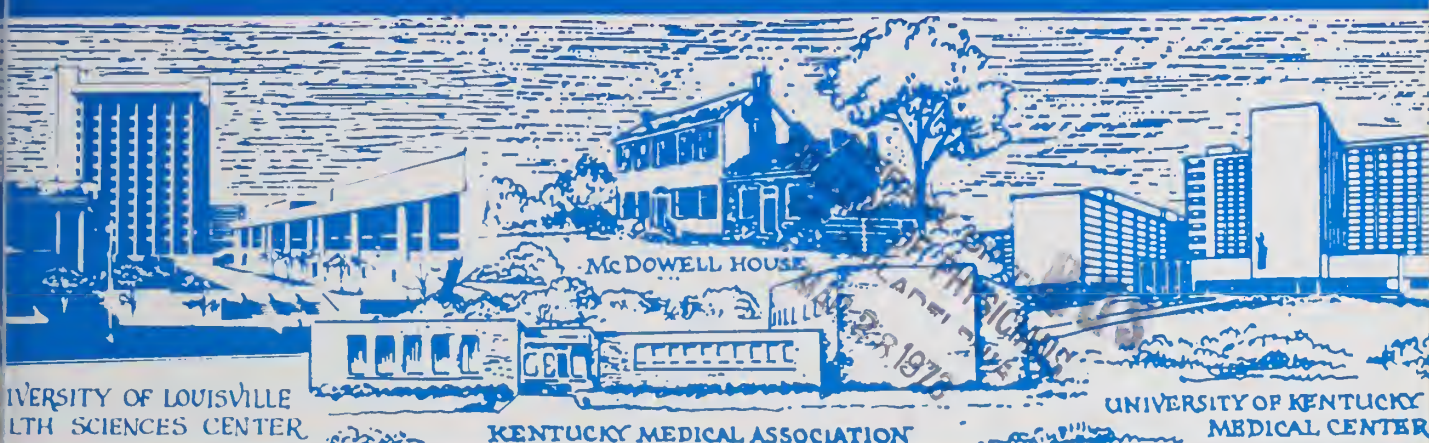
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March 29-30

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**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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# MESSAGE FROM THE PRESIDENT

## The Need to Know, The Need to Participate

**T**he meetings of most of our county societies, our hospital committees and our State Association are attended roughly by 30% of the membership at any given time. If we average the participation of the KMA Annual Meeting with the Interim Meeting, it would be lower than that. We are all rushed to death and have too many committees and too many meetings. Unfortunately, the 30% attendance is usually the same 30%. It is all very well to turn over the running of our societies to a very small group and in fact, if you will look at your county and state societies, they are run by about five per cent of the membership. It is more or less the same five per cent year after year. Organized medicine needs an infusion of new blood at its meetings and on its committees each and every year. Much of the complaining about what your officers do and what has happened, would be diluted if you took part yourself. The societies cannot and do not run as well when the same group of people run them all the time.

If the members of organized medicine really want to practice medicine as they would like, they are going to have to attend their meetings and they are going to have to know their business. In addition to attending, there are many changing facts of modern medical practice and its organization upon which we need to be informed. We are flooded with literature from our county, state, national and specialty societies, and yet, most of us are not aware of many of the facts of life that are now upon us.

How many of you understand what MEDICREDIT is? Can you explain it to a patient? And, understanding it, do you really think such a plan has a chance to supercede an extension of the present Medicare (Title XVIII) laws? If you don't, you ought to tell your leaders your views. How many of you understand what an HMO is? How many of you understand what a PREPAID MEDICAL PLAN is? When you come to a meeting to argue against something, it would be well to really understand its implications and meaning rather than to know only you are against it. You are going to be up against extremely articulate, intelligent, ruthless people, and in order to stand any chance you must be informed and you must participate. How many of you understand the implications of HR-1, which is now law? How many of you feel that in a few years there are going to be actual inspections of your office records by utilization committees? Did you know that some advocate not only non-physicians but non-health oriented people on these committees? How many of you think that required re-examination is going to be here for us all in five to ten years? How many of you understand the implications of a FOUNDATION? Of how it works, and what it can do for you? How many of you realize that the Federal government, in its wisdom, has ruled out organized medicine as the arbiter of fee review and quality care? How many of you have considered that a National Health Service plan should be put in before Nixon is out because it will be better than what will come afterwards? Some of our leaders have expressed this sentiment. If we are going to understand the really overwhelming changes that are going to be coming on us like an avalanche in the next three years, we must be informed and we must attend meetings.

I leave you with what to me are disturbing thoughts and urge you to attend your medical society meetings, to take part in your hospital committees, with seriousness and with knowledge.

JAMES B. HOLLOWAY, JR., M.D.  
KMA VICE-PRESIDENT

*This is the second in a series of articles written at the request of KMA President Lee C. Hess, M.D.*



# *The Kentucky Foundation for Medical Care*

## PSRO, Peer Review and Continuing Education Status Report of KFMC

**S**INCE November, 1972, when the impact of Professional Standards Review Organization (PSRO) legislation became apparent, the Kentucky Foundation for Medical Care has directed its attention to establishing a comprehensive utilization mechanism which might put us in a position to become the State PSRO agent.

In October, 1972, the Congress of the United States passed the Social Security Amendments of 1972, H.R.1, among which was the Professional Standards Review Organization provision. PSRO legislation will become effective in January, 1974, and will be under the control of an undersecretary of HEW, yet to be named. Your AMA has been active in assuming an advisory role and has, in fact, appointed a PSRO advisory committee. Probably during March, 1973, a National PSRO Council will be named, the duties of which will be to formulate rules and regulations for PSRO.

No attempt will be made to outline the myriad of details present in this newly enacted legislation, for as of this writing, regulations have not been written. However, in the words of Senator Bennett, the sponsor of PSRO, there is a "need for some effective mechanism to insure and control the quality, appropriateness and duration of medical care provided under government sponsored and funded programs." We can therefore surmise that the chief aim for this legislation will be toward "quality" control through "utilization" control.

According to the AMA Legislative Department's interpretation of this law, the duty and function of each PSRO will be to review for the purpose of determining a) the medical necessity for the services rendered, b) that the

quality of these services meets professionally recognized standards of health care, and c) that in-patient service was necessary and could not have been effectively performed on an out-patient basis.

You will remember that KMA gave the Foundation the prime responsibility for Claims and Utilization Review at its formation. Throughout 1972, our Trustee District Review Committees have functioned in the field of claims review in a magnificent fashion and we can proudly say that we are leaders in this field. More recently, the Foundation has made plans to use the same mechanism for utilization control. This will also be accomplished by the Claims and Utilization Review Committee of the Foundation, chaired by W. Neville Caudill, M.D. Under the guidance of the Foundation's past President, Henry B. Asman, M.D., specialty panels have been developing their own specialty "norms" and these will be made available to all KMA members and hospitals throughout the State. Hopefully in March or April, 1973, we can begin on-the-spot Utilization Review in a manner which is anticipated to be similar to that set forth by the PSRO law. You can see that by using the district review terms, all Foundation members will actually become involved in utilization control as this is specifically required by the PSRO law.

It is hoped by the Foundation's Board of Directors that we can become the PSRO agent for the State of Kentucky, which I think you will agree, is preferable to any other form of review agency that might develop. Anticipating this goal, the officers of the Foundation are currently in the process of making contacts in Washington to achieve this aim and have some in-patient into the drafting of regulations

being formulated by the National PSRO Council.

Along with the development of PSRO legislation and the inherent concept of quality review, the Committee on Medical Education of the Foundation, chaired by Frank R. Lemon, M.D. has been charged with the task of formulating a program of Continuing Education for all KMA and KFMC members. Recently, at the joint meeting on Medical Education in Elizabethtown, many new and provocative ideas were brought forth. It was the general consensus of the members present that some form of compulsory continuing education was needed in an effort to further show why your Foundation would be the best agent for the PSRO in the State. Doctor Lemon has had a vast amount of experience in the field of postgraduate medical education and has outlined many of his thoughts in the March issue of *The Journal*. In this article Doctor Lemon notes that his Committee on Medical Education is looking into the areas of 1) an accreditation system within the State

for community hospitals or other regional continuing education centers, 2) a definition of the minimal continuing education criteria which a physician should meet over a specified period of time, and 3) relating the quality of care delivered to the design of a statewide system, under the administrative direction of the KMA/KFMC, of a Professional Standards Review Organization. The Kentucky Foundation for Medical Care is awaiting the decisions of Doctor Lemon's Continuing Medical Education Committee so that it may incorporate this education concept into its structure. This, in my opinion, would greatly enhance our position as the possible State PSRO.

Events are occurring rapidly and the next few months will be crucial if we are to influence the trend of medical care in our State and nation. Your Foundation for Medical Care will be striving for this aim.

DAVID A. HULL, M.D., PRESIDENT  
KENTUCKY FOUNDATION FOR MEDICAL CARE

---

**You won't want to miss Doctor Hull at the  
1973 KMA Interim Meeting, March 29-30.  
He will be a program speaker at the Friday  
morning session. See full program, pages  
192-193.**



### The Role of The Private Physician in Tuberculosis Control

WILLIAM P. McELWAIN, M.D., M.P.H.  
*Commissioner of Health  
Commonwealth of Kentucky*

**M**ODERN diagnostic techniques and more effective anti-tuberculosis drugs have combined to: markedly decrease the patient's stay in the hospital; and significantly shorten the period of infectiousness. Currently, circa 250 patients are hospitalized; however, four out of every five active cases are at home with only 80% receiving an adequate treatment program. This deficiency must be corrected and can be accomplished most effectively with the public and private sectors of medicine working closely together as a team.

Historically, in Kentucky, the private physicians have been responsible for the detection of the majority of new active cases; today they are taking a more active role in treatment, and this trend is strongly supported by public health authorities. In support of this concept in health care delivery and the manifest demand, the following recommendations seem to be in order.

I.

A. On all cases suspected of having tuberculosis, obtain three (3) consecutive sputa specimens for microscopy and culture, including susceptibility tests, immediately preceding anti-tuberculosis therapy. Specimens may be submitted to any of the district laboratories (see under IV. C) or the state laboratory in Frankfort.

B. Submit to the Mycology Laboratory, Department of Community Medicine, College of Medicine, University of Kentucky, Lexington,

at least 2 cc of the patient's serum for fungal serology as a part of the differential diagnosis.

II. Notify county health department when a case is bacteriologically confirmed or suspected.

III. Start treatment if microscopy is positive; or if active tuberculosis is strongly suspected (after specimens collected).

A. *MINIMAL DISEASE*: No cavity. Total extent of disease does not exceed a volume of lung equivalent to that volume present above the second chondrosternal junction.

#### *TWO-DRUG TREATMENT REGIMEN:*

Isoniazid (INH) 300 mgs/day

Ethambutol (EMB) 15 mgs/kilo/day

(or)

Isoniazid (INH) 300 mgs/day

PAS 12 gms/day (for average weight or approx. 200 mgs/kilo/day)

*DURATION OF THERAPY*: 24 months total.

B. *MODERATELY ADVANCED DISEASE*: Total diameter of cavitation, if present, must be less than 4 cm. Total extent of disease (unilateral or bilateral) does not exceed:

1. The volume of one lung when the lesions are slight to moderate density; or,

2. One-third the volume of one lung when the lesions are dense and confluent.

#### *THREE-DRUG TREATMENT REGIMEN:*

Isoniazid (INH) 300 mgs/day

Ethambutol (EMB) 25 mgs/kilo/day for 2 months 15 mgs/kilo/day

Streptomycin 1 gm/day for 6 weeks—1 gm three times per week for 5 more months

(or)

Isoniazid (INH) 300 mgs/day

*This article was prepared by: H. M. Vandiviere, M.D., Director, Division of Tuberculosis Control, Kentucky State Health Department, 275 East Main, Frankfort, Kentucky, 40601 (and) Professor, Department of Community Medicine, College of Medicine, University of Kentucky, Lexington, Kentucky, 40506.*



PAS 12 gms/day (for average weight or approx. 200 mgs/kilo/day)

Streptomycin 1 gm/day for 6 weeks—1 gm three times per week for 5 more months (or)

Isoniazid (INH) 300 mgs/day

PAS 12 gms/day (for average weight or approx. 200 mgs/kilo/day)

Ethambutol (EMB) 25 mgs/kilo/day for 2 months 15 mgs/kilo/day

**DURATION OF THERAPY:** All regimens 24 months total.

**NOTE:** If cavity fails to close within 4 months, consultation is available through the Division of Tuberculosis Control, Kentucky State Department of Health.

**C. FAR ADVANCED DISEASE:** Disease which is more extensive than moderately advanced.

#### **MULTIPLE-DRUG TREATMENT REGIMEN:**

Isoniazid (INH) 300 mgs/day

Rifampin 600 mgs/day for 4 months (administer one hour before meals)—Ethambutol (EMB) 15 mgs/kilo/day

Streptomycin 1 gm/day for 6 weeks—1 gm three times per week for 5 more months (or)

Isoniazid (INH) 300 mgs/day

Rifampin 600 mgs/day for 6 months (administer one hour before meals)

Ethambutol (EMB) 25 mgs/kilo/day for 2 months—15 mgs/kilo/day

(or)

Isoniazid (INH) 300 mgs/day

PAS 12 gms/day (for average weight or approx.

prox. 200 mgs/kilo/day)

Ethambutol (EMB) 25 mgs/kilo/day for 2 months—15 mgs/kilo/day

Streptomycin 1 gm/day for 6 weeks—1 gm three times per week for 5 more months

**DURATION OF THERAPY:** All regimens a *minimum* of 24 months total.

**IV. TREATMENT FAILURES:** Treatment failures are indicated if there is a lack of clinical or radiological progress *or* if sputum culture is still positive at 4 months. In either case, review treatment in light of susceptibility tests. There are three possibilities:

A. Treatment failure with drug resistant bacilli on initial or subsequent tests.

B. Treatment failure with no evidence of resistant bacilli; therefore, it must be presumed that the failure is due to lack of self-administration of drugs.

C. Treatment failure due to atypical mycobacteriosis causes by bacilli with primary drug resistance.

The following drugs are used for treatment failure: Kanamycin; Viomycin; Capreomycin; Cycloserine; Pyrazinamide; Ethionamide. All these drugs are toxic and consultation with the Division of Tuberculosis Control, Kentucky State Department of Health is strongly urged. Professional assistance and drug availability information may be obtained through: Madisonville, 502/821-2820; Louisville, 502/584-5281; Paris, 606/987-3050; Ashland, 606/324-3131; London, 606/864-5121; Glasgow, 502/651-2151; Frankfort, 502/564-4360.

D. Specialty hospitals and physicians should continue to be utilized for retreatment (treatment failures) and surgical evaluation.

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## **Sports Seminar Being Planned**

Plans are now underway for the second annual "Seminar on the Medical Aspects of Sports" which will be held on May 17, 1973, at Eastern Kentucky University, Richmond.

This seminar, co-sponsored by the Kentucky Medical Association and the Athletic Department at Eastern, will attract top-flight program participants from throughout the country. Further details will be presented in upcoming issues of *The Journal*.

## **Opinion Available**

In the February, 1973, issue of *The Journal of KMA*, an article appeared entitled "Female Sexual Sterilization" written by Walter M. Wolfe, M.D. This article referred several times to the Attorney General's opinion on voluntary sterilization. The complete opinion of the Kentucky Attorney General on voluntary sterilization is available upon request by contacting *The Journal of KMA*, 3532 Ephraim McDowell Drive, Louisville, Kentucky 40205.



# THE INSURANCE PAGE



## Short-Term Hospital Admission

Several months ago this writer discussed the value of the deductible hospital insurance policy. Several sources were quoted as saying that deductible clauses were of little value in hospitalization insurance.

Recently third party carriers have noted a new utilization abuse of hospitalization in the short-term admission. The writer thinks that this can be attributed directly to policies which have no deductible clause. Some hospitals pride themselves that they have a low average stay per patient. This statistic alone does not tell the story. There may be numerous one or two day hospital cases which bring the average down. Further analysis of these cases reveals that they are not diagnostic admissions and that the admission occurred during the late evening or night. Could it be possible that the attending physician is substituting hospital admission for a night home call, or that the emergency room physician, being unfamiliar with the patient, is holding the patient overnight for the regular attending physician on his rounds the following morning?

This writer may possibly be guilty of such action. Sometimes the decision to hospitalize, or not to hospitalize, is difficult. Sometimes the patient does everything within his power to gain entrance to the hospital. This is especially true of Medicaid patients, since it is well known that they pay no deductibles. Some patients seem to wait until they know the doctor has gone before going to the emergency room.

The writer recalls one patient who was seen on a home call for a relatively minor chronic condition that could have been cared for in the office. One week later this patient called late in the evening stating that he had taken the medication prescribed and was not better. Since the patient had not been in the office since the home visit, he was advised to refill the medication and to come to the office on the

following morning for further evaluation. The patient was also advised that if this were a true emergency, the physician would be glad to make a home call. The patient definitely stated that he did not desire the physician to make a home call. Thirty minutes later a call was received from the emergency room stating that this patient had come to the emergency room seeking treatment. After the nurse presented her findings and observations, she was instructed to tell the patient that the physician would not see him in the emergency room, but would gladly see him at the patient's home if he would return home, and that the cost of the visit would be no more than the cost of coming to the emergency room to see the patient.

A second patient recently called the physician stating that she had been treated at home for a respiratory infection about one month prior to the time of the call. Since she had the same symptoms, she requested that the physician send her the same prescription she had received before. This was done and about 48 hours later the patient called requesting hospitalization since she had not recovered. The physician explained that he was unable to recommend hospitalization without examining the patient when she had no more symptoms than were presented over the phone, but that he would be glad to make a home call to examine the patient to determine if hospitalization was really necessary or to treat the patient, whichever the case may be. The patient declined the home call and apparently recovered since she returned to work a few days later.

Over the past few months numerous patients have called this physician stating that they feel they should be hospitalized. After questioning them over the phone it has been apparent that a few of these cases are medical emergencies and they are advised to go immediately to the

emergency room for further evaluation, but the majority of these cases apparently are not acute and many are not even under any current treatment program. One important factor seems to be that the patient's hospitalization insurance policy completely covers the hospital bill and pays usual and customary fees to the physician; whereas, the insurance policy does not cover office calls or home calls. Since the patient realizes that he must remain in bed a few days, whether he is hospitalized or not, he desires hospitalization in order to avoid paying the cost of the home call and the added cost of prescriptions.

At this time of increasing demands for physician services, most physicians are overworked

and it is much easier to admit the patient to the hospital than it is to make a home call or convince the patient that hospitalization is not necessary. The decision is placed squarely on the physician when the insurance policy contains no deductible clause.

Some readers may think that this writer is inviting trouble by calling attention of this situation to the third parties. The third party carriers are well aware of this situation and are now planning ways in which they may disallow these claims. My purpose is to call attention of this situation to the physician before his claims are disallowed.

LEWIS DICKINSON, M.D.

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### Have You Moved Recently?

Please send any change of address to *The Journal of the Kentucky Medical Association*, 3532 Ephraim McDowell Drive, Louisville, Kentucky 40205. We need your help in keeping our mailing list up to date. You are our best source of information.

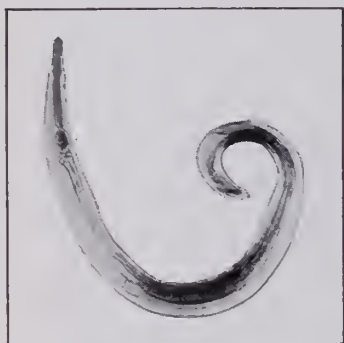
### Notice To Contributors

Members of the Kentucky Medical Association reading papers before other organizations are asked to submit their papers to *The Journal* for consideration by the Editors for publication. Detailed instructions to contributors appear in the Scientific Section of *The Journal* under Manuscript Memos. Please forward any papers to:

Charles C. Smith, Jr., M.D., Scientific Editor  
The Journal of the Kentucky Medical Association  
3532 Ephraim McDowell Drive  
Louisville, Kentucky 40205



# Pinworm therapy is often a family affair



**Contraindications:** History of hypersensitivity to thiabendazole.

**Warnings:** If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.

**Precautions:** Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction,

patients should be carefully monitored.

**Adverse Reactions:** Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of live *Ascaris* in the mouth and nose. Hypersensitivity reactions

# A New Dosage Form:

## Chewable Tablets 500 mg Mintezol® THIABENDAZOLE | MSD)



so easy to take  
everyone in the family  
can keep to the  
regimen you prescribe

include: fever, facial flush, chills, conjunctival injection, angioedema, anaphylaxis, skin rashes, erythema multiforme (including Stevens-Johnson syndrome), and lymphadenopathy.  
**Supplied:** Chewable tablets, containing 500 mg thiabendazole, in boxes of 36, strip packaged, individually foil wrapped; Suspension, containing 500 mg thiabendazole per 5 cc, in bottles of 120 cc.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

### INDICATION | DOSAGE SCHEDULE

MINTEZOL® (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infections. Dosages are weight related. For your convenience, the information in the weight-dose chart below is included in the full prescribing information and in the 1973 edition of PDR.

*The recommended maximum daily dose of MINTEZOL is 3 g (6 tablets).*

MINTEZOL should be given after meals if possible. Dietary restriction, complementary medications, and cleansing enemas are not needed.

The usual dosage schedule for all conditions is two doses per day. The size of the dose is determined by the patient's weight.

Weight-dose chart:

WEIGHT (lb)	EACH DOSE (g)	TABLETS
25	0.25	½
50	0.5	1
75	0.75	1½
100	1.0	2
125	1.25	2½
150 & over	1.5	3

The regimen for each indication follows:

INDICATION	REGIMEN	COMMENTS
Pinworm disease	Two doses per day for 1 day. Repeat in 7 days.  This regimen is designed to reduce the risk of reinfection.	If this is not practical, give 2 doses per day for 2 successive days.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses per day for 2 successive days.	A single dose of 20 mg/lb or 50 mg/kg may be employed as an alternative schedule, but a higher incidence of side effects should be expected.
Creeping eruption	Two doses per day for 2 successive days.	If active lesions are still present 2 days after completion of therapy, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses per day for 2 to 4 successive days according to the response of the patient.	The optimal dosage for the treatment of trichinosis has not been established.

\*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.

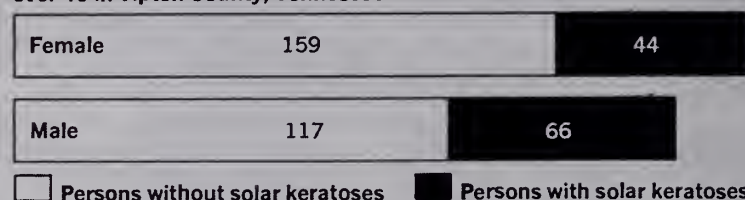
# What it means to live and work in Tipton County, Tennessee

**Persons who are white and  
over 40 have one chance in four  
of having solar keratoses...  
which may be premalignant**

An epidemiologic study\* conducted in Tipton County, Tennessee, revealed that 28.5% of white persons over 40 had solar keratoses; most had multiple lesions. Cluster sampling projected an estimated prevalence of 32.5% for white males and 19.5% for white females.

Though this is an unusually high percentage of affected persons, these lesions can occur in any white population, wherever people work or play out of doors.

**Prevalence of solar keratoses in white persons  
over 40 in Tipton County, Tennessee**



\*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.





## Solar, actinic, senile keratoses

Called by many names, the typical lesion is flat or slightly elevated, brownish or reddish in color, papular, dry, adherent, rough, sharply defined; usually multiple lesions, chiefly on exposed portions of the skin.

## Sequence/selectivity of response

Erythema in areas of lesions may begin after several days of therapy; height of reaction (only in affected areas)\* usually occurs within two weeks, declining after discontinuation of therapy. Since this response is so predictable, lesions that do not respond should be biopsied to rule out the presence of a frank neoplasm.

## Cosmetic results

Cosmetic results are highly favorable. Incidence of scarring is low—important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.

## 5% cream—a Roche exclusive

Only Roche formulates the 5% cream... high in patient acceptability... high in clinical efficacy, especially for lesions of hands and forearms... economical.

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Multiple actinic or solar keratoses.

**Contraindications:** Patients with known hypersensitivity to any of its components.

**Warnings:** If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

**Precautions:** If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

**Adverse Reactions:** Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

**Dosage and Administration:** Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

**How Supplied:** Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)amino-methane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

an alternative to  
conventional therapy  
**Efudex<sup>®</sup>**  
(fluorouracil)  
cream/solution



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110



# From the files of the

## COMMITTEE FOR THE

### STUDY OF MATERNAL MORTALITY

The patient is a 24-year-old married, black, female, Gravida 1, Para 0, who was admitted to the hospital with a history of lower abdominal pain associated with vaginal spotting for one month. She was seen each of the three days, immediately prior to admission, by her physician who treated her with antibiotics for "Salpingitis". However, when the patient did not show satisfactory improvement after three days of outpatient treatment, she was admitted to the hospital with the impression of an ectopic pregnancy. Upon admission her temperature was "normal", pulse 96, respiration 24 and blood pressure 117/68. Her hemoglobin was 10.2 gm with a hematocrit of 30%. The patient was ambulatory at the time of admission.

A surgical consultation was obtained on the evening of admission and the consultant described a tender left lower quadrant mass with associated slight abdominal distention and brownish vaginal discharge. This consultant felt their findings probably represented a pelvic abscess secondary to pelvic inflammatory disease. However, an ectopic pregnancy needed to be ruled out. However, it was elected to treat the patient with pain medication (1/32nd Dilaudid), intravenous fluids (Ringer's Lactate) and parenteral antibiotics (Ampicillin 560 mgs IM).

Through the evening and night immediately following her admission, she reportedly had a "fair night" but required pain medication twice during the night and the following morning her abdomen seemed more distended. A repeat hemoglobin was 9.2 gm with hematocrit of 28%.

At this time, an exploratory laparotomy was felt to be indicated and the patient was prepared for surgery. She was given a liter of saline pre-operatively and blood was begun immediately after intubation. At the onset of anesthesia the patient's pulse was reported to be 100 with a systolic blood pressure of 90. Upon entering the peritoneal cavity, a matted mass of hemorrhagic tissue was found to involve small bowel, the sigmoid, the appendix, the uterus and the cul-de-sac. After removal of an estimated 300-400 cc of blood, a ruptured left tubal pregnancy was apparent.

The "ectopic pregnancy" is said to have been removed with "adhesions being left in place on the bowel because they were firmly adherent." The abdomen was then closed with 0-chronic suture for the peritoneum, interrupted 2-0 figure-of-8 black silk sutures in the fascia, continuous 3-0 plain suture in the subcutaneous tissue, and interrupted 4-0 silk on the skin. After applying a dressing, the drapes were removed only to note that the "patient's color was not

good." The anesthetist at this point reported that there was no palpable pulse. External cardiac massage was instituted and intravenous sodium bicarbonate, mannitol and solu-cortef were administered. The heart beat was restored within 60-90 seconds and when the patient was discharged from the operating room to the intensive care unit her pulse was 126 with a blood pressure of 128/80. The patient's pupils were dilated and she was "non-reactive" and demonstrated facial twitching and did not resume spontaneous respirations while in the operating room. Over the first eight hours postoperatively the patient received 2600 cc of fluid intravenously with a 3000 cc urinary output via Foley catheter and another 200 cc of nasogastric output.

On the first postoperative day the patient's hemoglobin was 13.8 with a hematocrit of 42% and a white blood cell count of 19,400. She continued to be unresponsive, required oxygen via an endotracheal tube and was maintained on the mannitol, corticosteroids and intravenous ampicillin. She began to have seizures later that day.

On the second postoperative day a neurosurgeon consultant advised a tracheotomy which was performed. Electrolytes were as follows:

Normal Values:	7-6	7-8	7-9
Na 135-145 mEq/L	148.5	138	143.5
K 3.5-5	3.4	3.6	3.6
Cl 95-105	109	97	96
CO <sub>2</sub> 24-32	26.4	36.8	33.1

The remainder of the patient's postoperative course was progressively downward with the patient's neurological status never improving significantly and on the 10th postoperative day the patient expired. No autopsy was performed.

FINAL DIAGNOSIS: Ruptured tubal pregnancy complicated by cardiac arrest.

#### Comment

This maternal death was classified as a direct obstetric death with preventable factors. It was felt that it was a direct anesthetic death. The attending physician suspected an ectopic pregnancy, and obtained a surgical consult. It was noted that her blood count was certainly not ideal before surgery. Blood was available, and a certain amount replaced. However, it appears to the Committee that some anesthetic accident occurred which is not clear from the protocol submitted. An autopsy was not obtained so that we do not have complete information on this unfortunate situation.



# WHEN **FLU** HITS AND HURTS

WHERE

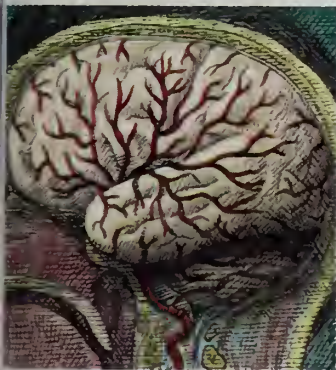
Muscles  
and joints



Wherever it hurts, Empirin Compound with Codeine usually provides the symptomatic relief needed.

WHERE

Headache



flu and associated respiratory infection, Empirin Compound with Codeine provides an antitussive bonus in addition to relief of pain and bodily discomfort.

**prescribing convenience:**  
up to 5 refills in 6 months,  
your discretion (unless  
restricted by state law); by  
telephone order in many states.

Empirin Compound with  
Codeine **No. 3**, codeine  
phosphate\* 32.4 mg. (gr. ½);  
**No. 4**, codeine phosphate\*  
64.8 mg. (gr. 1) \*Warning—may  
be habit-forming. Each tablet  
also contains: aspirin gr. 3½,  
phenacetin gr. 2½, caffeine  
gr. ½.



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Research Triangle Park  
North Carolina 27709



# EMPIRIN<sup>®</sup> COMPOUND c CODEINE

#3, codeine phosphate\* (32.4 mg.) gr. ½

#4, codeine phosphate\* (64.8 mg.) gr. 1





**IMPORTANT INFORMATION:** This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.

**Indications:** Lomotil is effective as adjunctive therapy in the management of diarrhea.

**Contraindications:** In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

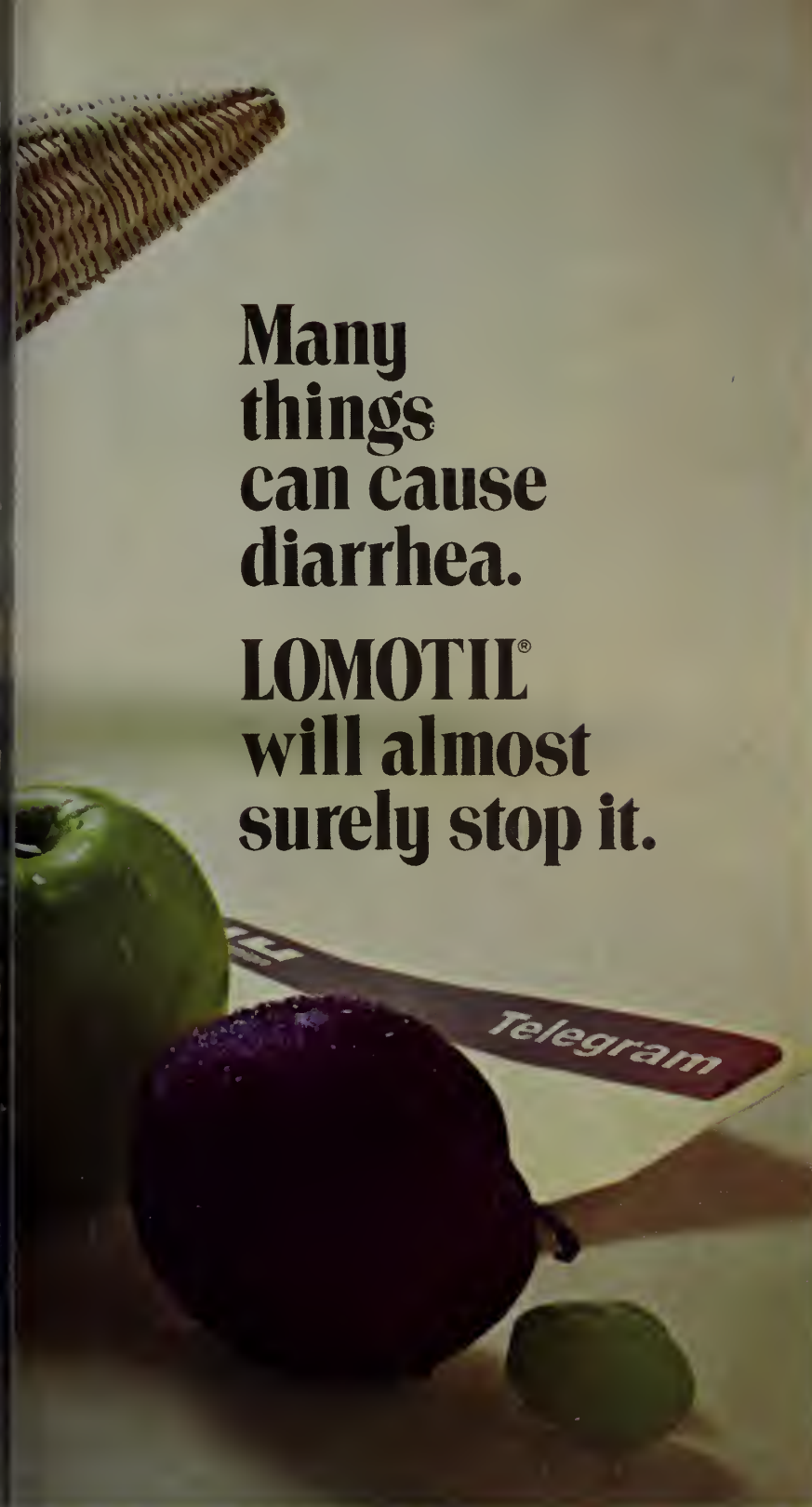
**Warnings:** Use with caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis.

**Usage in pregnancy:** Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the

breast milk of nursing mothers.

**Precautions:** Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage, but does not exceed recommended dosages. Administer with caution to patients receiving addicting drugs known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage. Strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with recommended dosage.

**Adverse reactions:** Atropine effects include dryness of skin and mucous membranes, flushing and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy.



Many  
things  
can cause  
diarrhea.

LOMOTIL<sup>®</sup>  
will almost  
surely stop it.

The causes of diarrhea are as varied as man's complaints and indiscretions. Because the causes of diarrhea can be obscure and because uncontrolled diarrhea can present serious problems, it is important to know a drug that will usually stop diarrhea promptly. For many physicians, the antidiarrheal drug of choice is Lomotil. It provides almost certain control of diarrhea.

It is also useful in controlling the intestinal transit time of patients with ileostomies and colostomies and the diarrhea occurring after gastric surgery.

Serious side effects are infrequent with Lomotil. It should be used with caution in young children, however, because of their variability in response. Use of Lomotil in children under two years of age is contraindicated.

**For the almost certain  
control of diarrhea,**

**LOMOTIL<sup>®</sup>**  
**TABLETS/LIQUID**

Each tablet and each 5 ml. of liquid contain:  
Diphenoxylate hydrochloride ..... 2.5 mg.  
(Warning: may be habit forming)  
Atropine sulfate ..... 0.025 mg.



SEARLE & CO.  
San Juan, Puerto Rico 00936

Address medical inquiries to:  
G. D. Searle & Co., Medical Department  
Box 5110, Chicago, Illinois 60680

12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. Use a narcotic antagonist in severe respiratory depression. Observation should extend over at least 48 hours.

**Dosage forms:** Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. **Liquid**, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of 1/2 ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

**Dosage forms:** Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. **Liquid**, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of 1/2 ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria and paralytic ileus.  
**Contraindications and administration:** Lomotil is contraindicated in children less than 2 years old. Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

**Overdosage:** Keep the medication out of the reach of children since accidental overdosage may cause drowsiness, even fatal, respiratory depression. Signs of overdosage include flushing, lethargy or coma, hypotension, reflexes, nystagmus, pinpoint pupils, tachycardia and respiratory depression which may occur



# Who knows what evil lurks in the mucous membranes?

## Ornade<sup>®</sup> knows.

Each Spansule<sup>®</sup> (brand of sustained release capsule) contains 8 mg. of Teldrin<sup>®</sup> (brand of chlorpheniramine maleate); 50 mg. of phenylpropanolamine hydrochloride; and 2.5 mg. of isopropamide, as the iodide.

Knows the public's enemies — nasal congestion, runny nose, sneezing, watery eyes.

Knows what to do about them too.

All through the dark night of upper respiratory difficulty, while ordinary cold remedies wear off, the decongestant, antihistamine, and drying agent in 'Ornade' fight the never-ending battle for comfort, symptomatic relief, and free airways.

Ornade<sup>®</sup>. Why not let it help fight your patient's cold war.

Before prescribing, see complete prescribing information in SK&F literature or *PDR*.

**Indications:** Upper respiratory congestion and hypersecretion associated with: the common cold; acute and chronic sinusitis; vasomotor rhinitis; allergic rhinitis (hay fever, "rose fever," etc.).

**Contraindications:** Hypersensitivity to any component; concurrent MAO inhibitor therapy; severe hypertension; bronchial asthma; coronary artery disease; stenosing peptic ulcer; pyloroduodenal or bladder neck obstruction. Children under 6.

**Warnings:** Caution patients about activities requiring alertness (e.g., operating vehicles or machinery). Warn patients of possible additive effects with alcohol and other CNS depressants.

**Usage in Pregnancy:** In pregnancy, nursing mothers and women who might bear children, weigh potential benefits against hazards. Inhibition of lactation may occur.

**Effect on PBI Determination and  $I^{131}$  Uptake:** Isopropamide iodide may alter PBI test results and will suppress  $I^{131}$  uptake. Substitute thyroid tests unaffected by exogenous iodides.

**Precautions:** Use cautiously in persons with cardiovascular disease, glaucoma, prostatic hypertrophy, hyperthyroidism.

**Adverse Reactions:** Drowsiness, excessive dryness of nose, throat or mouth; nervousness; or insomnia. Also, nausea, vomiting, epigastric distress, diarrhea, rash, dizziness, weakness, chest tightness, angina pain, abdominal pain, irritability, palpitation, headache, incoordination, tremor, dysuria, difficulty in urination, thrombocytopenia, leukopenia, convulsions, hypertension, hypotension, anorexia, constipation, visual disturbances, iodine toxicity (acne, parotitis).

**Supplied:** Bottles of 50 capsules.

SK&F Smith Kline & French Laboratories



# Continuing Educational Opportunities

From The

## KMA Postgraduate Medical Education Office

### IN KENTUCKY

#### MARCH

- 17 Tenth Annual Symposium on Oral Cancer, Health Sciences Center Auditorium, University of Louisville School of Medicine and Dentistry, Louisville
- 21-22 Nineteenth Annual Symposium on Cardiovascular Diseases, Stouffer's Louisville Inn, Louisville.
- 29-30 KMA INTERIM MEETING, Lake Barkley Lodge, Cadiz

#### APRIL

- 5 Eighteenth Annual Lexington Clinical Conference, "Clinical Problems in Gastroenterology," Lexington Clinic, 1221 South Broadway, Lexington
- 11 Postgraduate course, "Is It Necessary to Treat Hypertension," by Ray W. Gifford, M.D., Cleveland Clinic, Jewish Hospital, Louisville
- 12 Spring meeting, Kentucky Chapter, American College of Radiology, Continental Inn, Lexington
- 19-21 Workshop and conference on Pulmonary Thromboembolism, University of Kentucky Medical Center\*. Program chairman: Kazi Mobin-Uddin, M.D. Registration fee: \$150 (conference) and \$100 (workshop), Lexington
- 19 Ninth Annual Rheumatic Disease Symposium, Health Sciences Center Auditorium, University of Louisville School of Medicine, Louisville
- 30-May 1 Workshop on Cardiac Diagnosis and Treatment, University of Kentucky Medical Center\*. Program Chairman: Borys Surawicz, M.D. Registration fee: \$60. 11 hours AAFP credit requested.

#### MAY

- 2-4 Symposium on Pediatric Radiology, University of Kentucky Medical Center\*, Lexington

- 9-12 Annual Meeting, Kentucky Chapter, American Academy of Family Physicians, Ramada Inn-Bluegrass Convention Center, Louisville
- 11-12 Spring meeting, Kentucky Orthopaedic Society, Rowntowner Motor Lodge, Covington
- 24-25 Spring meeting, Kentucky Chapter, American Academy of Pediatrics and spring postgraduate course, University of Kentucky Department of Pediatrics, Lexington

### IN SURROUNDING STATES

#### MARCH

- 21-22 Postgraduate course, "Hodgkin's Disease, Leukemia and Lymphoma," Cleveland Clinic Foundation, Cleveland
- 24-25 Twenty-fifth Annual Joseph and Samuel Freedman Lectures in Diagnostic Radiology, University of Cincinnati, Cincinnati
- 28-29 Postgraduate course, "New Methods of Treatment in Neurology," Cleveland Clinic Foundation, Cleveland

#### APRIL

- 4-5 Postgraduate course, "Current Topics in Clinical Microbiology," Cleveland Clinic Foundation, Cleveland
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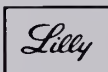
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## Endocrine Causes of Hypertension†

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*Aldosteronism, pheochromocytomas and hyperadrenal corticalism are the three principal "causes" of hypertension. The clinical diagnosis of these disorders has been largely due to the development and use of biochemical test procedures. These tests and assays are reviewed and their diagnostic application stressed.*

THE relationship of the adrenal gland to the pathogenesis of hypertension has long intrigued both clinical and basic investigators.

Tumors or hyperplasias of either the chromaffin (medulla) or non-chromaffin (cortex) parts of the adrenal glands and the functional derangements associated with them have been the objects of a rather pronounced clinical interest and investigational activity, this, despite the relative infrequency of these lesions as causal factors in hypertensive disorders.

The importance, however, of these disorders of the adrenal gland lies beyond the fact they are potentially curable causes of hypertension and its ravages. The unraveling of the endocrine basis for the hypertension produced by these lesions will ultimately end in an understanding of the humoral control of many basic physiological processes; witness the recent association of glucagon with pheochromocytoma and the high incidence of diabetes in patients with aldosteronism and the further clarification

tion of the renin-angiotensin-aldosterone axis.

The two principal hormones of the adrenal cortex in man are cortisol and aldosterone. Cortisol, produced by the fascicular and reticular zones of the adrenal cortex, is a hormone concerned with the adaptation of the body to the environment. It is essential for life and enables the body to withstand potentially injurious changes in the environment which are collectively known as stress. Aldosterone, on the other hand, is secreted by the cells of the zona glomerulosa, in the outer part of the adrenal's cortex, and is concerned with the control of sodium and potassium in the body. It has a homeostatic role directed towards the stabilization of the internal environment of the body.

The rather intimate relationships of the adrenal cortex and its hormones to the control of sodium and potassium metabolism and their important bearing on blood pressure in man and other animals has been known for some time. The adrenal cortices in patients with severe hypertension frequently manifest a nodular cortical hyperplasia. It has been repeatedly noted that the weight of the adrenal glands increases with advancing hypertension. In animals, adrenocorticoids, particularly those possessing significant mineralocorticoid activity, have been shown to be important, if not essential, provoking agents in the induction of experimental hypertension.

In man, hypersecretion of aldosterone has been associated with hypertension in Conn's syndrome and an increased secretion of deoxycorticosterone has been implied in the development of hypertension in 11 Beta-hydroxylase-deficient types of congenital adrenal hyper-

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plasias. Even in Cushing's syndrome, in which the output of aldosterone is not increased, when hypertension and hypokalemia occur they have been attributed either to the mineralocorticoid activity of the high levels of hydrocortisone which characterizes the syndrome, or to the hypersecretion of deoxycorticosterone.

Perhaps no recently described hormonal aberration has so caught the fancy and interest of clinicians, biochemists, endocrinologists and pathologists as the syndrome of hyperaldosteronism.

### Hyper-aldosteronism

The dilute, yet very potent steroid hormone, aldosterone, stimulates the retention of sodium and the excretion of potassium, magnesium, hydrogen and ammonium ions in the distal segment of the nephron<sup>1</sup>. Despite intensive research in the fields of chemistry, pharmacology and medicine, there is yet not a complete understanding of the role of aldosterone, relative to other factors in the control of electrolyte metabolism and in hypertension<sup>2</sup>. It must be appreciated that while aldosterone is undoubtedly the most potent mineralocorticoid, others exist and they may play an important role in the overall control of sodium metabolism.

An understanding of the normal control mechanisms of aldosterone is a prerequisite of an evaluation of its clinical importance and also of the construction of diagnostic and therapeutic techniques<sup>1</sup>.

*The role of the anterior pituitary:* The anterior pituitary, by means of ACTH, controls the secretion of cortisol and corticosterone by the adrenal cortex. It is not unreasonable to suspect or infer that a similar relationship exists between the pituitary gland and aldosterone secretion. This controlling role is however far from clear and the exact role of the pituitary with respect to the zona glomerulosa has not been established.

The absence of ACTH, either due to hypophysectomy or to hypopituitarism, does not usually lead to abnormalities in electrolyte metabolism characteristic of adrenal insufficiency. The zona glomerulosa which is responsible for aldosterone biosynthesis does not atrophy in the hypophysectomized animal as quickly as the deeper zones of the adrenal cortex and although atrophy does eventually occur, mineral

metabolism is not markedly affected<sup>1</sup>. Conversely, Cushing's syndrome, when the syndrome is the result of oversecretion of ACTH, may not necessarily be associated with sodium retention or increased secretion of aldosterone. The infusion of ACTH, at what, in terms of the plasma cortisol response, might be considered to be physiological levels, has only a transient effect on plasma aldosterone<sup>3</sup>. The threshold ACTH dose for aldosterone stimulation is also far higher than that for cortisol and corticosterone. Likewise suppression of ACTH by cortisol or dexamethasone has little immediate effect on the aldosterone secretion rate or the plasma concentration.

While data, such as outlined above, seem to point to a negligible influence of the pituitary gland on aldosterone, animal experiments are mixed in their results and point to pituitary "factors" other than ACTH as bearing some influence on the ability to synthesize aldosterone<sup>1</sup>.

*The role of the kidney and the renin-angiotensin system:* Renin, probably formed in the afferent arteriole of the renal juxtaglomerular apparatus, hydrolyses leucyl-leucine bonds in a plasma protein substrate, releasing a decapeptide, angiotensin I, which is further hydrolyzed to the pressor octapeptide, angiotensin II, by a converting enzyme located in the lung, plasma and other tissue (Fig. 1).

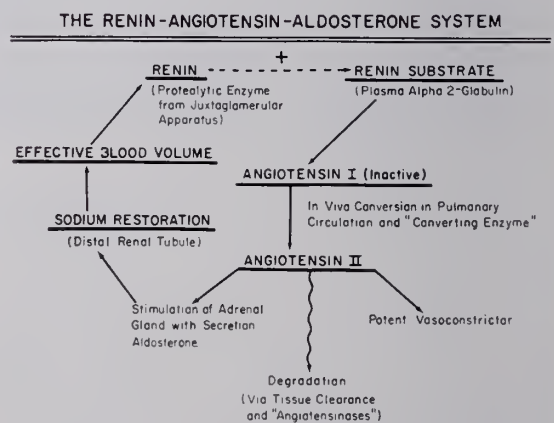


Figure 1

The recognition of the ability of renin to raise blood pressure and to have an indirect effect on electrolyte metabolism independent of its blood pressure effect was followed by the postulate that renin, by means of angiotensin

release might act as an aldosterone-stimulating agent and that some of its electrolyte active properties might therefore require the intervention of the adrenal cortex<sup>4</sup>.

Recognition of the renin-angiotensin system's ability to stimulate aldosterone secretion appeared almost concomitantly with the investigation of the "aldosteronism" syndrome.

It is certainly clear that angiotensin may play some part in the physiological control of aldosterone secretion. The magnitude of this role is however not settled or even clarified at this time. Angiotensin II is capable of stimulating aldosterone secretion in man and where there is a high level of angiotensin II, there is commonly also a state of hypertension. By contrast, when there is a *primary* increase in the secretion of aldosterone, plasma renin action and circulating angiotensin II levels are often secondarily suppressed.

Finally, while angiotensin has been shown to have a specific effect on aldosterone secretion, its activities are by no means confined to the adrenal cortex. It is able to exert influence on sodium retention by (1) direct renal action and (2) affecting salt and water appetite<sup>1, 2</sup>.

*The role of electrolytes:* There is now considerable evidence at hand to suggest that the response of aldosterone, either to ACTH or to angiotensin II may be modified by the sodium balance of the subject. The sodium status, for example, may determine whether the predominant effect of angiotensin is to increase the blood pressure or aldosterone secretion<sup>5</sup>. In the sodium deprived subject, the pressor response to angiotensin is reduced, while the aldosterone response is increased<sup>1</sup>. Most likely this is not a direct effect of the electrolytes on the cortex and probably represents a combination of stimuli including changes at some other focus such as the renin-angiotensin system.

*The role of other factors:* Central nervous system, liver stretch receptor system and the pineal gland have all been investigated without conclusive evidence of their part as control mechanisms<sup>1, 2</sup>.

Despite the many missing links and the often "at-odds" reports in the medical literature concerning the varied clinical, biochemical and investigative aspects of aldosterone and the renin-angiotensin system, the definition of clinically useful syndromes has evolved. In the simplest form of presentation, aldosteronism may be di-

vided into two major categories: primary and secondary.

### Primary Aldosteronism

The descriptions of the clinical spectrum and the diagnostic criteria of primary aldosteronism have undergone progressive revision since its original description by Conn<sup>6</sup>. This now classic syndrome was characterized by hypertension without edema, intermittent tetany, paresthesia, periodic muscular weakness, polyuria, polydipsia and biochemically by severe hypokalemia, hypernatremia, alkalosis and the presence in the urine of excessive amounts of sodium-retaining corticoid (Table 1). This syndrome was subsequently shown to be due to the presence of an aldosterone-producing "adenoma" of the adrenal cortex.

When the features of the classical disorder are present, the diagnosis of the syndrome is relatively easy, but variant forms present diagnostic difficulties; particularly when the helpful feature of hypokalemia is not present. More recently, Conn<sup>7, 8</sup> has suggested that the finding of a suppressed plasma renin activity, with or without hypokalemia, may serve as an important indicator of an underlying primary aldosteronism. Confirmation of this has subsequently led to an increased recognition of this disorder.

At the present time, the triad of (1) elevated urinary aldosterone; (2) suppression of plasma renin in the ambulatory state before and after a period of salt restriction; or (3) a normal urine 17-hydroxycorticoid excretion are the diagnostic hallmarks of primary aldosteronism (Table 2).

The suppression of plasma renin activity is in sharp contrast with the findings in secondary aldosteronism associated with renal or malignant hypertension where the plasma renin level are usually elevated above the normal range.

Expansion of the extracellular fluid volume is most likely the basis for the suppression of plasma renin activity<sup>2</sup>. It is believed that the volume expansion is an adequate stimulus for suppression of the renin and is independent of the plasma sodium concentration. Direct inhibition of renin secretion by an increased level of aldosterone per se has not been found to occur experimentally.



Not a little controversy exists over the incidence of primary aldosteronism. Much of the controversy arises from the disputed incidence of an increased aldosterone secretion in so-called benign "essential" hypertension. The importance of a subnormal plasma renin activity has also provoked controversy. The anatomical findings in the adrenal glands at the time of surgery and necropsy are also varied and not constant<sup>9-11</sup>.

The importance of measuring aldosterone under standardized conditions including posture and relating the result to the urine volume, prevailing level of sodium or potassium cannot be emphasized enough. If this is carried out, the false positives and false negatives should be reduced.

The finding of a subnormal plasma renin activity in patients who do not manifest the classical features of primary aldosteronism does not and should not detract from its diagnostic importance. Studies such as that by Gunnells et al<sup>11</sup> point to the fact that it rather broadens the concept of "primary aldosteronism" while at the same time does not dilute its significance. The clinical expression of the clinical form of hypokalemic primary aldosteronism probably constitutes no more than a portion of a larger spectrum of disorders of adrenal cortical function, each of which is associated with the appearance of a suppressed plasma renin activity.

Support for this concept will eliminate the division of opinion in reports dealing with patients manifesting normokalemic or hypokalemic primary aldosteronism, normal or in-

creased excretion of aldosterone and the variable anatomical findings in the adrenal glands at surgery. The syndrome of hypermineralocorticoidism proposed by Biglieri et al<sup>12</sup> and the question of the autonomy of aldosterone secretion in response to a wide variant of physiological stimuli also support the existence of a broad, often over-lapping spectrum, rather than rigidly compartmentalized entities.

### Secondary Aldosteronism

Secondary aldosteronism refers to an *increased* activity of the renin-angiotensin system in association with an *increase* in the secretion of aldosterone. The aldosterone secretion is increased in response to an adrenal stimulation that originates elsewhere in the body. The principal physiologic stimulus and probably the "final common pathway" for the aldosterone secretion is a reduction in the extracellular fluid volume. The hallmarks of secondary aldosteronism are an elevation in both urinary aldosterone and plasma renin activity (Table 3).

The sensitivity of aldosterone secretion to the extracellular fluid volume is depicted in Figure 1. Renin is elaborated and released following a decrease in the perfusion, pulsation or pressure in the renal afferent arterioles. Mediation of this phenomenon in man is presumed to be through a baroreceptor mechanism in the juxtaglomerular cells. In the plasma, renin acts as a proteolytic enzyme whose substrate is angiotensinogen (a component of the alpha-2 globulins). Angiotensin I is an intermediate product which is converted to angio-

Table 1  
Clinical Findings in Primary Aldosteronism\*

Clinical Signs and Symptoms	Very Common (100-75%)	Frequent (75-50%)	Occasional (50-25%)	Seldom (less than 25%)
Hypertension	×			
Muscular weakness		×		
Polyuria		×		
Headache		×		
Retinopathy (mild)		×		
Polydypsia			×	
Cardiomegaly			×	
Parasthesias				×
Visual disturbance				×
Intermittent paralysis				×
Tetany				×
Fatigue				×
Muscular discomfort				×

\*From Greenlee et al.<sup>14</sup>



tensin II. Besides being responsible for the hypertension of renal origin and a powerful peripheral vasoconstrictor, angiotensin II has been confirmed as the stimulant to the adrenal gland to produce aldosterone.

Many of the conditions of so-called "secondary aldosteronism" are not associated with hypertension and it is therefore convenient to separate them into hypertensive and non-hypertensive states.

**Table 2**

**Clinical Laboratory Findings in  
Primary Aldosteronism**

Increased aldosterone secretion - excretion  
Decreased plasma renin activity  
Normal 17-KS and 17-DHCS  
Hypokalemia  
Alkalosis  
Decreased body exchangeable potassium  
EKG evidence of hypokalemia  
Mild proteinuria  
Impaired renal concentration

**Non-hypertensive Secondary Aldosteronism**

This category includes many of the edematous states such as the nephrotic syndrome, cirrhosis with ascites, congestive heart failure and exaggerated physiological conditions such as pregnancy.

There is evidence that aldosterone secretion (rather than excretion) may be increased in many patients with the above mentioned disorders, but the extent to which this is due to an increased activity of the renin-angiotensin system is by no means clear. This, despite the fact that renin activity as measured in the plasma may be strikingly increased (particularly in the cirrhotic with ascites). A not inconsiderable part of the difficulty in assessing the role of the renin-angiotensin system is that of the two compounds, angiotensin II assays are less frequently performed. Even this measurement alone may be deficient for it does not take into consideration the *in vivo* conversion or clearance rate of angiotensin<sup>2</sup>. Finally the effect of salt restriction or salt depletion on the renin-angiotensin system must always be considered. All stimuli to aldosterone production are potentiated by sodium deficiency<sup>2</sup>.

**Hypertensive Secondary Aldosteronism**

Levels of renin, angiotensin and aldosterone

are usually all within the normal range in patients with so-called "essential" hypertension; particularly in the "benign" phases of the disease. In the advanced or malignant phases, all three are commonly elevated.

The association of malignant hypertension with loss of weight, polyuria, polydipsia, hypokalemia, hyponatremia and hyperaldosteronism has long been recognized. The presence of the malignant hypertension and hyponatremia are the points of difference from primary aldosteronism, but it is the almost invariably raised plasma renin activity that distinguishes this hyponatremic hypertensive syndrome from primary aldosteronism.

Renovascular hypertension still remains an enigma as far as the role of the renin-angiotensin system in the initiation and maintenance of the hypertension. Although renin, angiotensin and aldosterone levels may be increased in the hypertension of renal disease, they are not invariably so and the elevations, if any, are only modest. Of the three measurements, aldosterone levels are usually not increased.

**Pathological Changes in the Adrenal Glands  
in Primary Aldosteronism**

The diagnosis of primary aldosteronism has been reserved by Conn<sup>6</sup> for patients having the clinical features mentioned above and who also have adrenal cortical *adenomas*. The combination of the cortical adenoma and the clinical findings are commonly referred to as Conn's syndrome. These tumors tend to be small, often weighing less than 6 gms, and range in size from 0.2 cm to 3.0 cm in diameter<sup>9</sup>. Size of the tumors does not appear to be correlated with the preoperative serum potassium concentration or with the aldosterone excretion. There is a slight tendency for the tumors to be in the left adrenal gland. Their golden yellow or yellow brown color is characteristic and said to be highly suggestive of an "aldosteronoma"<sup>9</sup>. Different and varied histological patterns are present in different tumors and within fields of a single lesion. Many appear to be composed of the zona fasciculata cell type, but biochemically they manifest features of a mixture of zona glomerulosa and zona fasciculata cells<sup>9</sup>.

Bilateral adrenocortical hyperplasia rather than adenomas has also been discovered in cases of primary aldosteronism. For patients

Table 3

## Differential Diagnosis of Primary Aldosteronism by Biochemical Means

	Plasma Sodium	Plasma Potassium	Aldosterone Excretion or Secretion	Plasma Renin activity
Primary Aldosteronism	N or ↑	↓	↑	↓
Secondary Aldosteronism (Edematous states)	N or ↓	N or ↓	↑ ↑	↑
Secondary Aldosteronism (malignant or accelerated hypertension)	N or ↓	↓	↑ ↑	↑ ↑

such as these, Conn suggested the diagnosis of congenital aldosteronism. It is very likely these patients belong to a heterogeneous group including acquired aldosteronism, dexamethasone—suppressible hypertension and aldosteronism and so-called secondary “primary” aldosteronism.

Adrenal cortical carcinomas may also be associated with primary aldosteronism. Finally, patients with a pre-operative diagnosis of primary aldosteronism, may infrequently manifest adrenal glands which are normal.

#### Practical Diagnostic Aspects of Hyper-aldosteronism

Diagnostic use has been made of the fact that the renin-angiotensin system appears to be an important factor in the control of aldosterone secretion in man in the devising methods of differentiating between the two main categories of hyper-aldosteronism, in both of which hypertension may be a feature.

As indicated above, the diagnosis of these conditions may be analyzed into the following stages: (1) demonstration of an excessive aldosterone secretion; (2) measurement of plasma renin concentration to ascertain to the type of hyper-aldosteronism; and (3) confirmation that hypertension and hypokalemia associated with the disease are in fact due to excessive secretion of aldosterone; use of antagonists.

If after these investigations, primary hyper-aldosteronism is diagnosed, the investigation may be continued by: (4) location of the lesion; and (5) surgical removal of the lesion, or therapeutic blockade of the effects of aldosterone.

At this point we remind the clinicians that neither plasma renin nor aldosterone assays are necessary in the work-up of the majority of hypertensive patients. These should be reserved

for the relatively few patients in which the diagnosis is suggested by simpler means.

A serum potassium concentration should be obtained on every hypertensive patient *before* treatment, particularly with thiazides. If hypokalemia is present, the 24-hour urinary potassium excretion should be measured while the patient is on a regular salt intake (a urinary sodium concentration of greater than 100 mEq/24 hours) and not receiving supplemental potassium.

In the presence of hypokalemia, a urine potassium concentration of greater than 30 mEq/24 hours, is good evidence in favor of the diagnosis. A urine concentration of less than 20 mEq/24 hours is strong evidence against the diagnosis.

Surgical intervention should be individualized. Kaplan<sup>13</sup> states that the question as to the need for surgical treatment in *all* patients in whom the diagnosis has been firmly established is an open one. It is a valid question since the hypertension of primary aldosteronism is almost always benign, the hypokalemia can be fairly easily controlled and the surgery may necessitate total bilateral adrenalectomy. Certainly medical therapy should be considered in patients in whom the risk of operation is high or in whom the disease is relatively mild. Principles of treatment may be found in the reports of Greenlee et al<sup>14</sup> and Smithwick et al<sup>15</sup> and Gunnels et al<sup>11</sup>.

Several clinical and biochemical findings are however essential to justify exploration of the adrenal glands. Positive findings include hypertension with a relatively mild retinopathy, hypokalemic alkalosis associated with decreased renal conservation of potassium, increased secretion of aldosterone and suppressed renin activity. Negative findings include normal 17-hydroxycorticosteroid excretion, normal serum



sodium and an apparently normal renal angiogram.

Either malignant hypertension with grade IV retinopathy or an increased excretion of 17-hydroxycorticosteroids excludes the diagnosis of primary aldosteronism (except for the unusual adrenocortical carcinoma, where the 17-hydroxysteroids, 17-ketogenic steroids and the 17-ketosteroids are elevated in the urine).

When severe renal ischemia or sodium losing pyelonephritis coexists with primary aldosteronism, the diagnosis may be nearly impossible unless an adrenal tumor is visualized.

### Pheochromocytoma

Pheochromocytomas are usually benign neoplasms of chromaffin tissue origin. The incidence of pheochromocytoma has been variously reported and has ranged from a random necropsy selection of 0.1% to near 2% in hypertensive patients<sup>16, 17</sup>.

Ninety per cent of pheochromocytomas are located in or near the adrenal gland with a certain preponderance being manifested for the right adrenal gland. The remainder are intra-abdominal, or sometimes in the thorax, bladder or neck. As a rule the neoplasm is benign, but at least 10% are bilateral and at times there are co-existing adrenal and extra-adrenal tumors.

There has been shown to be a significant association of pheochromocytoma with neurofibromatosis and medullary carcinoma of the thyroid gland.

The diagnostic story of pheochromocytoma at the present time relates almost exclusively to its biochemical diagnosis. Assays of the hormonal products and their metabolites produced by the neoplasm have almost completely superseded pharmacological tests. The pharmacological tests (diagnostic accuracy not more than 75%), retroperitoneal pneumography, aortography and selective catheterization of veins for catecholamine determinations are often not only inadequate, but also the cause of serious morbidity and mortality<sup>17, 18</sup>.

The diagnosis of pheochromocytoma can be established by measurements of the urinary catecholamines (noradrenaline and adrenaline) metanephrine, and normetanephrine or VMA.

For practical purposes, determination of either metanephrine or VMA has proved equally reliable and are preferable to the catechola-

mine determination because the latter is more difficult and costly to assay and offers a greater chance for technical error. Properly performed and with appropriate reagent systems, a positive diagnosis should be obtained in more than 90% of the patients harboring a functional pheochromocytoma by measurement of any of the above mentioned compounds on a single 24-hour specimen<sup>17</sup>.

Estimation of free catecholamines is also of diagnostic value, provided that the concentrated urine specimens are assayed for both epinephrine and norepinephrine. There is also some suggestions that the ratio in urinary epinephrine/norepinephrine patterns provides preoperative indication of the type of tumor and thus its probable anatomical location.

Since the catecholamine assays are primarily performed by fluorometric techniques, false positives may occur in patients taking the anti-hypertensive drug, methyl dopa, or fluorescent drugs such as tetracycline and chlorpromazine<sup>16, 17, 18</sup>.

Any test which produces an acute rise or fall in arterial pressure and any potentially traumatic procedure should *not* be used in the diagnosis of pheochromocytoma.

The biochemical methods available for the assay of urinary catecholamines and their metabolites offer reasonable simplicity, a higher diagnostic accuracy and no morbidity. The importance of these techniques are highlighted by two aspects of the disease: (1) the clinical manifestations of pheochromocytoma are extremely varied and mimic other conditions; (2) prior to the discovery of the major metabolic pathways of the catecholamines between 1956 and 1959, approximately two-thirds of all pheochromocytomas were found at the necropsy table<sup>17</sup>.

Biochemical assays to be used in the detection of a patient with a pheochromocytoma fall into two categories; "screening" procedures and definitive quantitation.

The relative ease with which the laboratory can perform some "screening assays" has led to the suggestion that all hypertensives require the "screen" in the course of their diagnostic work-up. In practical application, however, the highest yield of positive results has been obtained when the patients have had one or more of the following indications: (1) hypertension,



labile or sustained; (2) paroxysmal symptoms; (3) a hypermetabolic state without objective evidence of thyrotoxicosis; (4) a marked change in blood pressure or pulse, or both, in response to a minor injury, parturition or administration of an anesthetic; (5) a neurocutaneous syndrome (von Recklinghausen's syndrome, etc.); (6) a familial history of pheochromocytoma and (7) evidence of a multiple or pluriglandular endocrine disorder<sup>17</sup>.

#### Metabolism of the catecholamines

There are four naturally occurring catecholamines: dopamine, noradrenaline, adrenaline and N-methyl adrenaline. Clinical interest centers principally around adrenaline and noradrenaline. In normal individuals there is a daily release of the catecholamines. Most of the released catecholamines are metabolized prior to their secretion in urine. Enzymatic inactivation is catalyzed principally by monoamine oxidase (MAO) and by catechol O-methyltransferase (COMT), but the relative importance of these two enzymes in the primary process differs. With circulating catecholamines, COMT, is more important in catalyzing the initial enzymatic inactivation. MAO assumes greater importance in the dealing with noradrenaline released from tissue stores. These enzymatic differences are reflected in the different percentages of catecholamines and their metabolites excreted in the urine of normal individuals and of patients with pheochromocytoma<sup>19</sup>.

Less than 10% of endogenous adrenaline or noradrenaline is excreted in the urine in an unaltered form. The principal metabolic products of these two catecholamines in man are the 3-O-methylated amines, metadrenaline and normetadrenaline, their conjugates and VMA<sup>20</sup>.

The acidic metabolites of the biologically active monoamines are present in considerably higher concentrations than other catecholamine metabolites. Unlike the other catechols, VMA is relatively stable, largely excreted in the free state and hydrolysis prior to its estimation is usually not needed. Because of these attributes, VMA has been measured more commonly than other catecholamine metabolites<sup>20, 21</sup>.

There are numerous ways to measure vanillylmandelic acid (VMA). The use of so-called screening tests which nonspecifically measure

urinary phenolic acids should be discouraged. False positive assays occur in patients eating bananas, certain other fruits and vegetables, chocolate, tea, coffee and foods containing vanilla extract, and in persons taking medications, such as aminosalicyclic acid, mephenesin and glyceryl guaiacolate.

Since the VMA "kit" tests are crude determinations and require the dietary restriction of foods rich in tyramine, they do not qualify and should not be used as "screening tests", unless the physician is willing to accept as high as a 30% false positive rate. The colorimetric reaction in common use in these kits is further interfered with by prevalent urinary constituents, especially phosphate. This interference has yielded as high as a 50% false negative rate.

Preferred methods for the quantitative estimation of VMA are based on a specific reaction with the vanillin nucleus of VMA following oxidation of the side chain. The methods of Sunderman<sup>22</sup> and Pisano<sup>23</sup> fulfill these laboratory requirements but are not especially suited for screening of patients.

For the past four years we have been screening patients at the University of Michigan Medical Center by a thin-layer chromatographic separation of an ethyl acetate extract of urine followed by specific VMA color development with diazotized p-nitroaniline<sup>20, 21</sup>. The method is that of Preston<sup>24</sup> and our experience leads us to consider this identification of an increased VMA excretion to be superior to the measurement of total VMA/24 hours for the following reasons: (1) false positives have been rare to absent, (2) the patient's drugs (Aldomet, Serpasil, Diuril, PAS, isoniazid etc.) need not be discontinued since the chromatography separates these compounds from VMA and other phenolic acids and they may further be distinguished by their own color and R<sub>f</sub>, and (3) dietary restrictions are not required. Bi-directional chromatography is preferred by some authors.

Regarding other assays, the experiences of Gitlow and his associates<sup>17</sup> are perhaps the best documented. Regarding metanephrine assays, these authors and others have indicated that all their patients with pheochromocytoma excreted increased quantities of total metanephrine. The major drawback, however, is the

variability of excretion during illnesses that subject the patient to severe stress: hemorrhagic shocks, sepsis, widespread metastatic disease, etc. Therefore a normal metanephrine level rules out the presence of a pheochromocytoma, but an elevated level does not necessarily prove its presence.

While the excretions of increased quantities of homovanillic acid and dopamine are almost universally observed in association with neuroblastomas, the value of their measurement in pheochromocytomas is limited and they will be found elevated only in the occasional, usually malignant pheochromocytoma.

The assay for the metabolite, 3-methoxy-4-hydroxyphenylethylene glycol, is considerably more complex than those for vanillylmandelic acid or metanephrine and does not appear to offer any advantage over these assays.

#### Assessment of Cortisol

Time does not permit an indepth study of the hypothalamic pituitary-adrenocortical system and the discussion must be confined to the assays and significance of plasma "cortisol".

Cortisol (hydrocortisone) is quantitatively the most important hormone of the adrenal cortex and is essential for life. The tissues involved in its production are the hypothalamus, the anterior lobe of the hypophysis and the adrenal cortex.

Natural ACTH, released into the systemic circulation following exposure to stress, causes an increased secretion of cortisol from the adrenal cortex. It is to be noted that the adrenal cortex, unlike the anterior pituitary, does not store its hormones. An increased secretion of cortisol is thus synonymous with increased synthesis. In addition, it should also be noted that the adrenal medulla is activated by all forms of stress, and that the adrenaline released in these situations stimulates the release of ACTH, enhancing the effect of corticotrophin releasing factor.

Radioimmunoassays have indicated that basal plasma ACTH concentrations vary in a cyclic fashion between 12 and 55 mg/ml<sup>25</sup>. This rhythm is circadian. As Grant and Hall<sup>25</sup> point out, this term is used to cover periods not exactly 24 hours, and is more accurate than the more commonly used "diurnal rhythm". "Nyctohemeral rhythm" relating to day and to

night, may also be used. The plasma ACTH concentrations show a maximum in the early hours of the morning (before awaking) and a minimum about midnight. This circadian rhythm is a manifestation of the cyclic functioning of the hypothalamus due to the presence of a built-in "biological clock", regulated originally no doubt by the alternating light and darkness of day and night. The cyclic release of ACTH thus brought about results in a maximum concentration of plasma "cortisol" of about 25 mg/100 ml in the morning, falling to a minimum of less than 8 mg/100 ml at midnight.

In addition to the normal circadian rhythm of hypothalamic activity, the production of cortisol is also under a *negative feedback* control. This form of control can be overridden under stress. Thus ACTH secretion may continue to rise despite increasing plasma cortisol. This phenomenon is observed to occur in response to the stress of major surgical procedures.

The production of cortisol does not exceed 20 mg/24 hours and that which is secreted is transported in the plasma, mostly bound to protein.

Transcortin (cortisol binding globulin) is a specific plasma protein with a high affinity for cortisol. It is almost saturated with the hormone at normal physiological concentrations. Albumin also binds cortisol, less specifically, but with a high binding capacity. Thus, under conditions of stress, the excess cortisol can be taken up by albumin after the rapid saturation of transcortin.

Despite the fact the protein binding is relatively weak, the ability of cortisol to bind to protein has been used by Murphy<sup>26</sup> to develop a rapid, sensitive and more specific method for measuring cortisol.

The usual methods for determining plasma cortisol, however, measure all the cortisol in the plasma, both the bound and free. Since little cortisol is lost from the kidney, free cortisol measurements in the urine have been also recommended as sensitive and reliable tests of hyperadrenal corticalism<sup>27</sup>.

The methods that have been developed for the measurement of the circulating adrenocortical hormone are dependent upon the orientation of isomerically active groups on the common nucleus of three cyclohexane rings



joined to a cyclopentane ring<sup>28</sup>.

Based on this isomeric orientation, the blood steroids have been estimated in a variety of ways:

1. as reducing steroids
2. as isonicotinic acid hydrazone
3. as Porter-Silber chromagens
4. by fluorescence, both soda and acid

Steroids with a hydroxyl group on the 11 carbon atom share the property of fluorescence when exposed to ultra-violet light in a strong sulfuric acid solution. Included in this group are cortisol, corticosterone and the 20 beta-ol derivatives of cortisol and corticosterone.

Initially, the only method which offered sufficient simplicity to merit consideration as a clinical chemical procedure was the colorimetric technique of Silber and Porter<sup>29</sup>. Their method and its modifications, which depend on the color reaction of cortisol and phenylhydrazine, although still used, is difficult to operate, requires considerable technical effort and skill, is relatively insensitive, and can hardly be considered sufficiently robust to warrant consideration as general screening techniques<sup>30</sup>.

The recommended method for the clinical determination of plasma corticosteroids is the relatively simple fluorometric method of Mattingly<sup>30, 31</sup>. A report by the Medical Research Council of London has recently substantiated this assessment<sup>30</sup>.

There are however serious drawbacks in its use and too high clinical expectations will be thwarted if they are not appreciated.

There is a serious lack of specificity with only 55%-59% of the total fluorescence produced in plasma samples being due to cortisol<sup>25, 30</sup>. While this lack of specificity is not a major disadvantage for clinical investigation, it does mean that reliance on absolute values are not reliable nor justified. In addition, the administration of certain drugs, notably tetracycline and spironolactone, causes serious interference with the method and should be avoided during the test period. If the drugs cannot be withdrawn, the laboratory must use alternative ways to assess the hypothalamic-pituitary-adrenocortical system. Grant and Hall<sup>25</sup> also note that the extensive normal data compiled for the urinary 17-oxosteroids (17-OS) excretion and the urinary 17-

hydroxycorticosteroids (17 OHCS) excretion is not available for plasma "cortisol". Indeed no attempt is made to determine absolute values, and single measurements are worthless.

Since the fluorometric assay is not a specific procedure for the assay of cortisol—an appropriate term is "plasma corticosteroids" to describe the results obtained with this method.

The test should be used in the following configuration:<sup>25, 28, 30</sup> (1) in a paired-sample sequence to determine the presence or absence of the normal circadian changes (regardless of the absolute concentration), (2) in conjunction with provocative or suppressive agents to evaluate the responsiveness of the adrenal cortex and (3) evaluate patient's adrenal cortices during or after long term exogenous synthetic corticosteroid therapy.

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(References Continued on Page 170)



# Vulvovaginitis in a Child†

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*An unusual case of a vulvovaginitis in a six-year-old girl is presented as well as a review of other causes of vulvovaginitis in a child.*

C. T. is a six-year-old Caucasian girl whose mother gave the history that over the past two years her daughter had been having a vaginal discharge which was occasionally purulent and blood tinged. The daughter had not complained of either lower abdominal or vaginal pain. Because of soiling and unpleasant odor, the mother had changed the girl's underpants as often as four times a day. She had taken the girl to two different physicians during these years because of the vaginal discharge and she had been treated with antibiotics and AVC cream. Although none of these medications helped more than temporarily, the child had never had a pelvic or rectal examination. One week prior to her hospitalization she was seen by a third physician who had given her a trial of antibiotics and sitz baths for four days. Following this, upon rectal examination a pelvic mass was found and she was referred to a gynecologist.

Her childhood had been within normal limits and developmental milestones had been reached at a normal age. She was in second grade and doing well in her schoolwork. Both mother and patient denied the possibility of introduction of a foreign body into the vagina.

Physical examination was normal except for the rectal-pelvic exam. No masses could be felt abdominally. The patient did have a small amount of light, soft pubic hair. On rectal examination a mass could be palpated in the vagina and this extended into the right adnexa. Because the patient would not cooperate for a pelvic examination in the physician's office, she was hospitalized. An x-ray of the pelvis

was taken and interpreted as being normal with no foreign body seen. Admission laboratory data were: hemoglobin, 14.8; WBC, 7,900; urinalysis, within normal limits; SMA 12, normal; and a negative pregnancy test.

Examination under anesthesia was done on the second hospital day. A fixed, firm mass in the vagina 3-1/2 by 1 cm was found. Using a nasal speculum the vagina was inspected and a top to a ballpoint pen was extracted with some difficulty. Following the removal of the pen top, there was still a great deal of induration at the apex of the vagina and in the right fornix. Cultures obtained at this time grew hemophilus influenza, diptheroids and beta hemolytic streptococcus, Lancefield Group C.

The patient was seen six weeks later for follow up, at which time pelvic and vaginal examinations were normal except for a minimal amount of induration in the right fornix. The cervix was visualized and appeared normal. The uterus and adnexa were felt to be normal.

## Discussion

Vulvovaginitis as a result of a foreign body accounts for one to two per cent of all pediatric vaginitides<sup>1</sup>. Blood tinged vaginal discharge in a premenarchal girl is felt to be pathognomonic of a foreign body. Vaginal inspection and rectal examination should be performed if there is the slightest question of a vaginal or pelvic disorder.

Huffman classified premenarchal vulvovaginitis as follows:<sup>2</sup>

- I. Non-specific Vulvovaginitis
  - A. Secondary to poor perineal hygiene
  - B. Secondary to respiratory infection
  - C. Secondary to skin infection
  - D. Secondary to intestinal parasite
  - E. Secondary to foreign bodies
  - F. Secondary to urinary tract infection
  - G. Etiology undetermined

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## II. Specific Vulvovaginitis

- A. Gonorrheal
- B. Other Neisseria
- C. Mycotic
- D. Trichomonas
- E. Hemophilus Vaginalis
- F. Other specific infections
- G. Exanthematous

The point to be made in this case is obvious. Vaginal discharge in a premenarchal girl is abnormal and demands a diagnosis which can

only be accomplished by doing a complete physical exam in addition to a thorough history. The youngster must be examined even if this necessitates hospitalization and anesthesia. If proper diagnosis and treatment cannot be carried out by the original investigator, then the case deserves a referral.

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### Endocrine Causes of Hypertension

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# Skew Deviation

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*Skew deviation, in which one eye is deviated medially and down, while the other is displaced laterally and up, is a useful clinical sign of posterior fossa pathology. Autopsy was done in three patients with this condition.*

Skew deviation of the eyes is considered a useful clinical sign of a lesion in the posterior fossa, although there is disagreement as to the exact location. This disorder is described as a syndrome associated with posterior fossa disease in which one eye is deviated medially and down (hypotropia), whereas the other eye is displaced laterally and up (hypertropia)<sup>1, 2</sup>. According to Cogan, the condition is a hypertropia which is not due to either a neuromuscular lesion of the oculomotor system or to localized orbital disease<sup>3</sup>. There may be variations in the degree of ocular displacement depending on the direction of gaze. Differentiation from weakness of individual extraocular muscles may be difficult and possible only by detecting associated signs of brain stem disease.

Because very few patients with skew deviation have been autopsied, this report of three such patients in whom postmortem examination was performed and anatomical location obtained is presented in order to clarify the underlying pathology.

## Case Histories

**Case #1—46-year-old female.** This woman suddenly became unresponsive and simultaneously a left hemiplegia developed. Both eyes were deviated to the left and they would not pass the midline either with passive head movements or by ear canal irrigation. Skew deviation with her right eye deviated medially and down-

ward and her left eye laterally and upward was noted 24 hours after onset. She died one day later. At autopsy, there was a right intrapontine hemorrhage involving the right brachium pontis and rupturing into the fourth ventricle (Fig. 1).



FIG. 1. Right intrapontine hemorrhage, involving the right brachium pontis, extending into the lower midbrain and rupturing into the 4th ventricle.

**Case #2—41-year-old female:** This patient suddenly became unresponsive, followed by a generalized convulsion and paralysis of her right-sided extremities. On initial examination, her left eye was midline but slightly above the horizontal, whereas the right was deviated down and in. Doll's eye movements could not be elicited. The pupils were round, equal and reactive to light. Her condition remained unchanged and she expired four days after onset. At autopsy, a left ponto-mesencephalic hemorrhage was found, sparing the brachium pontis (Fig. 2).

**Case #3—40-year-old male:** This man noted visual blurring and at that time his right eye was found to be deviated down. His pupils were equal and reactive and he had a full range of ocular movements. Two days later there was no change in the position of his right eye or in the reactivity of his pupils, but he was unable to look conjugately in either direction and he also had vertical nystagmus. He then developed progressive lethargy and weakness of his right-sided limbs. Six days after onset, he was found to have bilateral ptosis

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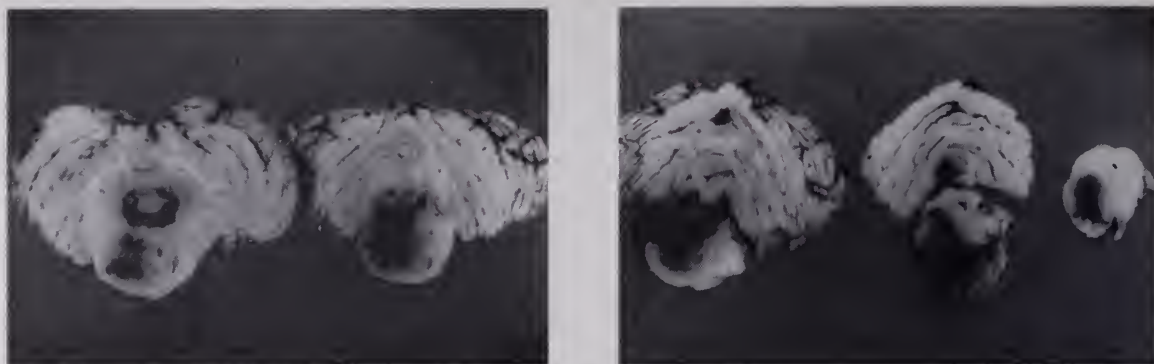


FIG. 2. Left ponto-mesencephalic hemorrhage, sparing the brachium pontis on both sides; minimal blood in the 4th ventricle.

and poorly reactive, unequal pupils with the right being 3 mm and the left 6 mm. He died 12 days after the initial symptoms. At autopsy, there were multiple cerebral abscesses including a lesion in the left mesencephalon (Fig. 3).

### Discussion

Skew deviation was first produced in the experimental animal by Hertwig in 1825<sup>4</sup>. Potzl and Sittig described a patient in 1925 with skew deviation and a lesion in the ventral caudal portion of the vestibular complex<sup>5</sup>. In 1954, this condition was described in one patient with the Arnold-Chiari malformation and in two individuals with platybasia<sup>6</sup>. Post-mortem study of the latter cases was done but extensive tissue damage prevented adequate clinical-pathological correlation. In 1959, Smith and Cogan described 58 cases of internuclear ophthalmoplegia in which 12 had skew deviation and in 10 of these the eye ipsilateral to the lesion was hypertropic<sup>7</sup>. Cogan and Goldstein in 1961 reported 28 patients with unilateral posterior fossa lesions who had skew deviation<sup>8</sup>. The hypertropic eye was ipsilateral to the pathologic process in 14 patients, contralateral in 12 and alternated twice. Allerand in 1962 described paroxysmal skew deviation in association with a brain stem tumor<sup>9</sup>. At autopsy, widespread brain stem involvement was found. In 1964, Smith and David reported 25 cases of skew deviation<sup>2</sup>. The etiology was varied but only one postmortem specimen was obtained and in this case there was a brachium pontis lesion ipsilateral to the hypotropic eye.

Skew deviation following posterior fossa surgery was reported in animals by Luciani in 1891<sup>10</sup> and in man by Holmes in 1917<sup>11</sup>. This condition has been reported in association with

the lateral medullary syndrome<sup>12</sup> and in patients with transient basilar artery ischemia<sup>13</sup>. A patient with skew deviation whose right eye was hypotropic was found at autopsy to have progressive multifocal leukoencephalopathy with a circumscribed plaque of demyelination involving the right middle cerebellar peduncle<sup>14</sup>.

Stimulation of the ampullary nerve of a semicircular canal will produce skew deviation<sup>15</sup>. In our Case #1, the lesion involved the right middle cerebellar peduncle and was ipsilateral to the hypotropic eye. Similar findings occurred in patients reported by Smith<sup>2</sup>



FIG. 3. Abscess primarily involving the left mesencephalon with brain stem distortion and extension across the midline. No involvement of the pons.

and Bolton<sup>14</sup> suggesting that the hypotropic eye is ipsilateral in middle cerebellar peduncle disease. In Case #2, a lesion occurred ipsilateral to the hypertropic eye, affecting mainly the left ponto-mesencephalic junction and the medial longitudinal fasciculus but sparing the middle cerebellar peduncle. In Case #3, the pathologic process was located

in the left mid-brain, including the medial longitudinal fasciculus on that side and possibly on the other, but the middle cerebellar peduncle was again normal. It appears that when skew deviation is due to a disorder in the rostral end of the medial longitudinal fasciculus, the hypertropic eye may be ipsilateral.

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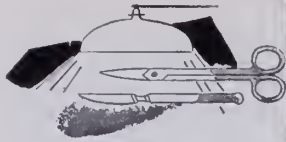
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# GRAND ROUNDS



The University of Kentucky College of Medicine

This Journal feature will be presented alternately by the University of Louisville and the University of Kentucky Departments of Medicine and Departments of Surgery. We hope to have these features revolve around subjects of immediate practical interest to the practicing physician; and, for those of us not able to attend grand rounds in the teaching centers as often as we might, we hope this will represent a bit of a refresher course.

## Spinal Cord Injuries—Who Does What?

### Participants

GORDON BROCKLEHURST, M. CHIR., M.B., F.R.C.S., ENGLAND, MODERATOR  
H. MARTIN BLACKER, M.D., ARTHUR HELLEBUSCH, M.D., JOHN MCCLOSKEY, M.D.  
AND RICHARD MORTARA, M.D.

*Doctor Brocklehurst:* At least 5,000 cases of spinal injuries occur yearly in the U.S.A. and some 50% of these patients have neurological complications. In the University of Kentucky Medical Center we see approximately 50 spinal injuries a year of which 30 to 40 have neurological involvement<sup>1</sup>. There is increasing interest in the plight of these patients and in the possibility of limiting or preventing the spinal cord damage, and the emphasis is being placed upon the rapid transportation of these patients to the special centers which can provide maximal comprehensive treatment. The patient should be transported without either flexing or extending the spine and a good and neutral position is maintained by lying the patient supine and placing some sandbags on either side of the head and neck, if the injury is thought to be in the cervical region. If the patient is unconscious and likely to have upper airway problems a lateral or semi-prone position is better so that the oropharynx can drain and the tongue fall forwards, and a small pillow is used to keep the neck in line with the trunk. Assessment of these patients in the emergency room is the initial problem facing the surgeon.

*Doctor Mortara:* The emergency room assessment must pay attention to the history, physical examination, initial neurological examination, radiographic assessment and the early resuscitative measures.

The alert patient can give his own history,

and for the unconscious patient or the patient suffering from multiple serious injuries the history should be obtained from relatives and the first aid workers who brought him from the accident site. The history of the nature of the injury may indicate the mechanism involved, e.g., the patient who has dived into a swimming pool and hit the bottom, and come to the surface paralyzed. Attention must be paid to whether sensory or motor symptoms were present immediately after the accident or developed later.

In the physical examination the whole patient should be observed in particular for respiratory distress and shock. A cervical spinal cord lesion may paralyze the intercostal muscles and accessory muscles of respiration but spare the diaphragm (C-3,4,5). Inspection of the chest will show no intercostal movement and the diaphragmatic pattern of the breathing is easily observed. Unconsciousness, upper airway obstruction or chest injuries may add to the neurological problem and make the respiratory inadequacy acute. High spinal injuries produce autonomic paralysis and there is associated hypotension. Tachycardia, pallor and sweating should raise the suspicion of additional blood loss and the chest, abdomen and wounds are examined with this in mind. The examination of the abdomen may also show the distended bladder from the acute retention of urine which follows most spinal injuries. The spine should be examined by palpation rather than by turning the patient over, and hematomas indicating the site of injury should be

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noted: it is not uncommon nowadays to detect the marks of a seatbelt. In assessing a patient with a spinal injury we should constantly remind ourselves that although our primary interest may be in the neurological aspects of the patient we are physicians, and must look for other injuries which have a bearing on the patient's neurological condition.

In the neurological examination, which should be concise but brief, motor power is assessed by asking the conscious patient to move his limbs, or assessing the response of the unconscious patient to a painful stimulus. Movement at the shoulders, elbows, wrists, hips, knees and ankles should be recorded either in the accepted 0 to 5 grading or in a specific descriptive term. Sensory abnormality is initially sought for by noting the response to pinprick or the pinwheel which, if present, will establish a level of hypalgesia. It is important to note that when a level is established just above the nipple this may mean that the lesion lies somewhere between T-5 and C-4 (because of the overlap from the supraclavicular nerves) and the actual level must be looked for by examining the axilla and the upper limbs fully. In the lower limbs, unless the back of the limbs and the perineum are examined, a limited saddle hypalgesia from a cauda equina lesion may be missed, or, on the other hand, sparing of sacral sensation in an otherwise total paraplegia may be overlooked. If the level is detected below which there is dense hypalgesia to pinprick then deep painful stimuli by pressing the pretibial or iliac crest region or the tendon Achilles can be used to confirm the finding. Posterior column sensation should be specifically checked by examining position sense, and perhaps vibration sense, from the toes upwards, for these modalities are preserved in the anterior cord syndrome (see below). Deep tendon reflexes are usually absent below the level of a complete cord transection in the first few hours after the injury. Preservation of deep tendon reflexes below a sensory or motor level at this stage may indicate an incomplete lesion. A definite plantar response may have the same significance, but spontaneous or easily elicited priapism occurs very early after spinal cord transection and suggests a poor prognosis. The complaint of radicular pain by the patient or the finding of a

region of hyperpathia on the sensory examination may be further indications of the neurological level of the lesion. The cauda equina or low conus lesion is accompanied by absent deep tendon reflexes in the ankle if the S-1 segment is involved. At the end of the initial neurological examination a good baseline should be recorded and some idea of the nature and severity of the lesion will have been obtained.

Respiratory insufficiency from a cervical spinal cord lesion per se will in many cases require assisted ventilation via an endotracheal tube. The latter should be passed by an expert, usually through the nasal route, in order not to disturb further the alignment of the cervical spine. The degree of assistance in oxygenation is determined by obtaining blood gases and the patient should be stabilized from this point of view as quickly as possible. Superimposed respiratory problems from associated facial, maxillary or chest trauma make the situation more acute and require urgent relief in the emergency room. Tracheostomy should be avoided if possible because it interferes with early anterior fusion of the cervical spine (see below). An intravenous infusion is set up and a baseline hematocrit obtained and the hypotension from the so-called 'neurogenic' shock is treated by volume expansion with Ringer's lactate followed by blood if associated hemorrhage is the real problem. The immediate resuscitation of the patient, and control of fluid balance, as well as the necessity to assess any injuries to the urinary tract, mean that a Foley urethral catheter must be inserted in the emergency room under sterile conditions; this also has the desired effect of relieving the bladder which is distended from acute retention (see below—under Urological Management). Initial radiographic evaluation is then undertaken.

*Doctor Blacker:* The measures mentioned earlier to prevent further injury to the spinal column and its contents may be worthless if one's vigilance flags when the patient is in the radiology department. The patient should not leave the supervision of a physician while radiographs are being taken. The following are some useful general principles of spine radiography.

1. The films should be approached systematically. One notes the following:
  - a. The alignment of the anterior edges of the vertebral bodies
  - b. The height and integrity of EACH vertebral body and of each intervertebral disc space
  - c. The alignment of the posterior edges of the vertebral bodies
  - d. The integrity and alignment of the facets
  - e. The contents of the spinal canal (the area between the posterior edges of the vertebral bodies and the anterior edges of the vertebral arches)
  - f. The spinous processes and the spaces between them
  - g. Soft tissues
2. Repeat radiographs or special views may be absolutely necessary to help rule out a fracture. The cervical region in particular harbors these pitfalls:
  - a. The odontoid process may be fractured, an abnormality which may be detected only with special views (open jaw AP view and/or laminograms in AP and lateral views).
  - b. On the lateral view, the only part of the cervical spine which projects anterior to the anterior edges of the vertebral bodies is the anterior arch of the atlas. The odontoid process should lie immediately posterior to the atlas' arch. Occasionally the transverse ligament of the atlas may rupture without a fracture of either the atlas or axis. This may allow an atlanto-axial dislocation. This is a potentially life-threatening condition since the odontoid process acts as a mass lesion impinging on the ventral aspect of the upper cervical cord. When the neck is extended this atlanto-axial dislocation may not be detectable. If such an injury is suspected careful flexion of the neck under the supervision of the physician will allow the dislocation to become manifest on a lateral radiograph.
  - c. Not infrequently, especially in those individuals with short muscular necks, the lower cervical spine will not be visualized on the lateral film. One must see the C-7

and preferably the C-7/T-1 articulation on the lateral film lest a dislocation be missed. Two techniques may bring the lower cervical spine into view: An assistant may firmly exert a downward sustained pull on the patient's wrists while the lateral film is being taken. It may be necessary to take laminograms to make certain that this critical region does not harbor an abnormality.

- d. Facet fractures in the cervical region may be disclosed by instructing the technician to angle the tube 30 degrees caudal for the AP view.

In summary, the keys to radiographic evaluation include careful supervision of the patient while the radiographs are being taken, the use of a systematic approach to interpretation of the films, and the insistence of complete visualization of the various areas of the spine, even if it means special views.

*Doctor Brocklehurst:* Would you have all these special views done at the time of the initial radiographic evaluation?

*Doctor Blacker:* Not necessarily, although most of them would be obtained by diligent supervision in the radiology department with the knowledge of what should be looked for. Some of the special views and procedures like laminograms could be left until a later stage.

*Doctor Brocklehurst:* Doctor Mortara, supposing the x-rays show an unstable fracture or fracture dislocation of the cervical spine. What would you do next?

*Doctor Mortara:* I would shave the parietal regions of the skull and use Crutchfield or Vinko tongs to apply traction. The hole for the tongs is made at the parietal eminence in line with the back of the pinna and ten pounds would suffice for initial traction.

*Doctor Brocklehurst:* How many pounds would you use ultimately to reduce a fracture dislocation?

*Doctor Mortara:* I would increase the traction, five pounds at a time, up to 40 pounds at least and in a big man be prepared to go even higher to reduce such a fracture dislocation. During the reduction, however, I would repeatedly examine the patient's neurological function to see that it was not altering for the worse. If reduction was not achieved I would



study the x-rays carefully and consider the possibility of interlocked facets which would have to be reduced by an open operation. This is one good indication still for an operation from the posterior approach and would have to be undertaken as soon as the patient was otherwise stable.

*Doctor Brocklehurst:* What about the general management of the patient over the first few days, Doctor McCloskey?

*Doctor McCloskey:* I would like to characterize the early care of the cervical fracture patient. The patient's care should be total and well-planned from the start. He should not be left alone and should almost always be in the ICU. The injury is usually devastating both from the psychological and the physical standpoint. Both aspects should be given close attention. Psychologically the patient is injured, in pain and usually in respiratory distress. He is frequently having trouble with his secretions and unable to talk. He often has no useful extremity movement and may not even be able to feel his body. He is suddenly totally dependent. Physically aside from his fracture and possible associated injuries, the effects of acute quadriplegia present the doctor with a whole set of difficult problems. From the start, attention should be given to pulmonary care, fluid and electrolyte balance, the GI tract, urinary tract and skin care. Rehabilitation starts immediately with frequent turning, the prevention of bedsores and physical therapy to prevent contractures. An NG tube is usually required for several days because of ileus.

The most dramatic problem encountered in acute quadriplegia are pulmonary and fluid and electrolyte management. The patient with a cervical cord injury usually has a reduced vital capacity, initially to around 1,000 ml, and his cough is greatly impaired. We think that with intensive pulmonary care some patients with only diaphragmatic respirations can still be managed without intubation or tracheostomy, but most will require ventilatory help.

Dysfunction of the autonomic nervous system is usually present and frequently a challenging problem. For example: a 22-year-old male patient whom we recently treated had a C-8 quadriplegia. He presented hypotensive with a bradycardia; his skin was red and dry from the neck down. He was febrile from

101° to 102° throughout most of his hospital course because he did not sweat. He required four units of blood transfusions to stabilize his hematocrit at 35. He had had no external blood loss and no serious soft tissue injury. He required supplemental albumin administration to keep his serum protein above 6 gm%. His problems were further complicated by inappropriate ADH. Fluid management must be very well thought out. If the patient is initially resuscitated from his hypotension with large amounts of crystalloid he will quickly become peripherally edematous and his already compromised pulmonary status may be further damaged by the sequestration of fluid in his lungs. The patient with acute quadriplegia as you can see has several special problems which require at best a few days to stabilize.

*Doctor Brocklehurst:* How do you identify the inappropriate ADH syndrome?

*Doctor McCloskey:* Hyponatraemia, renal excretion of sodium, hyperosmolar urine, hypo-osmolar serum, normal renal and adrenal function. It is due either to the cervical spinal cord injury per se, or to prolonged intermittent positive pressure respiration. It is treated by carefully restricting the fluid intake until it corrects itself.

*Doctor Brocklehurst:* During this period of initial stabilization and intensive general care, and reduction of fracture dislocations of the cervical spine there is an opportunity to re-examine the patient frequently and confirm the neurological situation. Which neurological syndromes of spinal injury do you think are important, Doctor Blacker?

*Doctor Blacker:* There are approximately 30 ascending and descending tracts in the spinal cord, yet the clinician need remember three in assessing spinal cord injury: a) The **spinothalamic pathway** at any given level conducts impulses having to do with the sensations of temperature, pain and crude touch from the opposite side of the body. b) The **posterior columns** conduct impulses relating to light touch, vibration and position sense from the SAME side of the body. c) The **corticospinal tracts** are concerned with voluntary motor control of the same side of the body.

The clinician also needs to remember that the spinal cord is a segmented organ with lower



motor neuron assemblies arranged in the following rostro-caudal relationships:

BODY PART	BONY SPINAL SPINAL CORD	
	LEVEL	LEVEL
Neck	C1-C4	C2-C4
Upper extremities	C5-T1	C5-T1
Intercostals and abdominals	T2-T10	T2-L1
Lower extremities	T10-L1	L2-S2
Sphincters	L1	S2-S4

It is also important to remember that vertebral injuries below L1 may be associated with injuries of the roots of the cauda equina only, since the cord terminates at the L1-L2 level in most people.

Deducing the location and extent of a given cord lesion involves two processes. The first is the determination of the "longitudinal address" of the lesion. To do so, one invokes the segmental concept of the anatomy of the cord. For example, if the upper extremities are spared but the intercostals, lower extremities, and sphincters are paralyzed, the lesion is just below the outflow of cord segment T1.

Two general types of lesions are recognized: the "complete" and the "incomplete". The complete lesion means an anatomic or functional transection of the cord giving rise to total disappearance of motor and sensory function below the lesion. If there is any evidence of function below an injury, the lesion is "incomplete". Incomplete lesions may fall into one of several possible patterns giving rise to a spinal cord syndrome. We need discuss only two types here.

The first type is the "anterior cord syndrome". This involves loss of function of the anterior two-thirds of the cord which includes the spinothalamic tracts and the corticospinal pathways bilaterally. The patient exhibits absence of deep pain and temperature sensation as well as loss of voluntary motor activity below the lesion. Because the posterior columns are spared, the patient retains light touch localization, vibratory and position sense bilaterally. This anterior cord syndrome may be produced by a ventral mass such as an acutely herniated disc, and/or by interference with the circulation through the anterior spinal artery. The presence of this syndrome is considered by some to be an indication for operation—usually an anterior approach to remove

the offending mass. All too often, the deficit, once established, is irreversible.

The second type of incomplete lesion is the "central cord syndrome". In this condition the more peripheral tracts of the cord are relatively spared, i.e. those parts of the corticospinal and spinothalamic tracts to the lower extremities as well as most of the dorsal columns. Thus, the patient has profound weakness of the upper extremities with intact position sense and retention of more strength in the lower extremities.

The central cord syndrome is thought to result from a hyperextension injury in the cervical region. Older people are especially vulnerable to this kind of injury. This obtains because the presence of spondylosis produces a potentially compressive force from anteriorly while the infolding of an often hypertrophic and rigid ligamentum flavum produces a compressive force posteriorly. The ligamentum flavum may infold so markedly with extreme extension of the neck that a complete block of the spinal canal is produced, thus "squeezing" the cervical cord. It is this AP compression which has been shown to inflict damage on the more central portions of the cord. The presence of the central cord syndrome is thought to be a contraindication to operation.

The prognosis of spinal cord injuries for neurological recovery involves essentially three factors: a) The time course of the onset of the deficit—the shorter the onset the graver the prognosis. b) The completeness of the deficit—generally total sensorimotor paralysis has a worse prognosis than partial paralysis. c) The presence of early improvement—in general if the patient exhibits some return to function within the first 24-48 hours he may continue to improve to the point of full recovery. Thus, at the two extremes we find that immediate, complete sensorimotor paralysis with no return to function within the first 48 hours has a virtually hopeless prognosis, while a neurological deficit which evolves over a period of hours and which is incomplete, and which after reduction of a dislocation or performance of a decompression begins to improve in the first 24 hours, will very likely go on to marked improvement and even a complete recovery.

*Doctor Brocklehurst:* There are very few indications for such procedures as spinal tap

and myelography in the management of spinal injuries. A spinal tap is obviously of value when there is a compound wound of the spine and meningitis is suspected. Sometimes one meets an infant or young child with an obvious spinal cord lesion on clinical examination, and it is not clear from the history whether the child has been injured or not. The radiographs may show no bony abnormality, but a spinal tap may show that there is blood in the CSF which is strong evidence in favor of trauma.

The myelogram is most helpful and indicated when the neurological syndrome, particularly if it is progressive, does not look compatible with the level or degree of spinal column abnormality shown on the plain radiographs. Conditions such as extradural impingement by large prolapsed disc fragments, or an increasing extradural hematoma should show on a myelogram and lead to surgical treatment. The demonstration of a block on a myelogram due to an intramedullary lesion in the presence of a complete or indeed even an incomplete spinal cord lesion on clinical examination is no real help to management.

We mentioned the insertion of a urethral Foley catheter in the emergency room to aid with the initial evaluation and general care of the patient with a spinal injury, but what do you propose, Doctor Hellebusch, as the important principles of management of the urinary tract in the patient with a spinal cord injury?

*Doctor Hellebusch:* The approach at the University of Kentucky Medical Center to the management of the urinary tract in patients with spinal cord injury stems from our experience with both the acute and the long-term situation, the latter being rather more important from the urological standpoint. Immediately after an injury to the spinal cord the bladder is initially atonic, even if the neurological deficit is actually an upper motor neurone lesion. The initial requirement, therefore, is some form of bladder drainage. The best overall management is intermittent catheterization, on a four to six hour basis, using an aseptic technique which has been shown to be very effective in paraplegic centers. This approach, however, for most general hospitals, and any small hospital, is not feasible because of the lack of 24-hour coverage by personnel specially trained in this technique. The indwelling urethral catheter

has been the longstanding alternative approach and we feel that this is wrong for two reasons: 1) spinal injury patients are usually men and the problems from urethritis and chronic prostatitis predispose to long-term complications, and 2) the indwelling urethral catheter precludes the development of any kind of satisfactory reflex emptying at an early stage. Our approach, therefore, has been to insert a suprapubic tube either straightaway in the emergency room or when the patient already has had a urethral catheter inserted, to replace this by a suprapubic tube within the first 24 hours. The suprapubic tube is usually inserted using a blind technique through a suprapubic trocar or cutting down upon a sound passed per urethram up into the fundus of the bladder. A relatively small gauge sialastic suprapubic tube with a self-retaining balloon is used and the aim is to keep the skin-tube junction immobile and well sealed off. The patient is then managed with a suprapubic tube until 'spinal shock' (autonomic paralysis) is over.

At approximately two weeks the patient is then evaluated by cystometry and voiding cystograms to ascertain whether a spastic or flaccid bladder has resulted from the injury. In the case of a flaccid bladder, especially in men, the suprapubic tube is left indwelling until the patient and physician are certain that no further motor recovery will occur. Some type of suprapubic diversion is then recommended, usually an ileal loop. Women, on the other hand, can be taught to evacuate a flaccid bladder using the Credé technique. When a spastic bladder is the situation, and usually the patient has a neurological deficit of upper motor neurone lesion type, the suprapubic tube is clamped periodically and the patient allowed to void per urethram. The residual urine after voiding can then be checked, using the suprapubic tube. If emptying of the bladder becomes adequate (residue under 50 cc) the suprapubic tube is removed and some external drainage system is used to keep the patient socially dry. During this period vigorous and specific antibiotic treatment for associated cystitis and prostatitis must be undertaken. This technique is satisfactory in men, but needs long-term outpatient follow-up to maintain efficient emptying of the bladder and a check of residual urine and recurrent infection.



Women with a spastic bladder cannot be treated in this fashion because the lack of an external device makes the patient socially unacceptable. The indwelling urethral catheter can only be avoided by some type of suprapubic diversion.

In the assessment of bladder emptying undertaken in the subacute state some patients will show a good voiding pressure but residual urine persists because there is partial obstruction from the external sphincter, which can be visualized in the voiding cystogram; external sphincterotomy is done to relieve this urethral resistance, and this has been quite successful in other institutions, and our own. If external sphincterotomy does not succeed in allowing the patient to empty his bladder, and residual urine with infection persists at approximately six months, a suprapubic diversion is again recommended.

The importance of early ambulation has been stressed from a neurological and rehabilitation standpoint, and this is also important in the prevention of persistent urinary tract infection and hypercaluria; stone formation must be closely looked for in the long-term management of any immobile quadriplegic patient.

The importance of some type of initial bladder drainage performed as an emergency after the acute spinal injury cannot be overemphasized because if such a patient is allowed to develop full-grown urinary tract retention with two liters in the bladder, a detrusor which might have developed automatic emptying will become flaccid from the massive distention.

In summary, the urological management of the bladder in spinal cord injuries consists of preventing retention of urine within the neurologically impaired bladder, avoidance of infection and early ambulation to prevent calculus formation.

*Doctor Brocklehurst:* This is probably the right point to mention rehabilitation. The emphasis in using this word is upon getting the patient back to a state of useful livelihood, and this is best achieved by, on the one hand, avoiding any increase in the neurological deficit, and preventing such complications as pressure sores, contractures, and renal failure, and on the other hand achieving a reduction and stabilization of the injury to the spinal column in the quickest and most efficient manner. The rehabilitation begins therefore in the Emergency

Room, and should be the outcome of the kind of detailed comprehensive care which pays attention to nursing of the skin, physical therapy of the joints, catheter and bladder care, and the total psychological outlook of the patient from this point onwards. It is important to reconcile the patient to his or her neurological deficit, particularly when there is no chance of recovery.

The other aspect of rehabilitation is the main reason why in the past few years we have undertaken early surgical fusion of these cervical injuries using an anterior approach to the spine. This has enabled us to achieve interbody fusion of the fracture dislocations, and to undertake total vertebral body replacement for the severely crushed vertebral body fracture with increasing efficiency and success.<sup>2</sup> The fixation is sufficiently stable to enable the patient to get up and to be mobilized early whatever neurological deficit he has, and we have found no increase of neurological deficit from these procedures. The operations are best undertaken after the first two to three days, and if assisted ventilation has been necessary up to this stage the sialastic endotracheal tube is left in place, renewed during the operative procedure, and left for two or three days afterwards, without ill effects to trachea or larynx. A tracheostomy can then be done, if necessary, because the surgical wound will have sealed off.

The application of the same principles of reduction, early anterior fixation and early patient mobilization to the lower thoracic and thoraco-lumbar injuries is less successful because the degree of stability which can be achieved by internal fixation cannot withstand the disruptive forces of a very unstable fracture dislocation in that region, and early mobilization will be accompanied by re-dislocation, increasing deformity, pain and possibly an increased neurological deficit. Early fixation of these fractures still must be accompanied by a period of conservative management from six to 12 weeks until the healing fracture site restores stability. Such treatment is little advance upon the method of managing these patients without attempting surgical reduction and fixation, as advocated by Guttman.<sup>3</sup> Severe crush injuries at the thoraco-lumbar junction, which have in themselves some residual stability, can however, be treated by early anterior spinal fusion



and followed by mobilization of the patient within two to three weeks.

It will be seen that the main principles in the management of the patient with a spinal injury are the general ones behind the ideas of successful rehabilitation. Surgical procedures are at present to be seen primarily in this context, and only in the relatively rare circumstances of an increasing neurological deficit, or the clear demonstration of cord compression related to fragments knocked off the back of the vertebral bodies (the 'tear-drop' fracture of Schneider)<sup>4</sup> can surgical decompressive procedures be regarded as an urgent necessity. In these circumstances, we still advocate achieving the decompression by the anterior route, and continue the procedure into an anterior fusion.

The recent experimental evidence of the nature of the detailed pathology of spinal cord injury, and the beneficial effects of early cooling

of the spinal cord, may lead to very early operations undertaken to expose and treat the damaged cord. Such procedures are likely to be developed only in some regional centers, and for their success will still require extremely rapid referral and transportation of the patients to such centers, and the coordination of such advanced surgical treatment with the kind of comprehensive care which we have discussed, and a rehabilitation program and followup extending over many months and years after the time of injury.

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## SPECIAL ARTICLES

### Community Preparation for the Development of a Health Maintenance Organization Network

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IN January, 1968, a student brought to a seminar on underdeveloped countries, held at the University of Kentucky, a community worker from the north side of Lexington. This worker was amused that the class devoted itself to problems of development in Africa, Asia and South America, when it did not know what was happening a mile away, in the north of Lexington. Soon thereafter members of the seminar received invitations to attend meetings of a neighborhood action group of Community Action Lexington-Fayette. From these meetings emerged a picture of the nature of health care available to low-income families in Lexington.

In the north part of Lexington, where most low-income families are situated, nearly all health resources had migrated away over the previous 20 years to the southern, predominantly middle-class part of the city. Even the Health Department, which has been situated in a low-income area on the north side, and had had physicians available for the sick, moved to the south side of town to a location initially lacking sidewalks or bus service, and terminated its physician services, with the exception of a number of specialized clinics. As a result of rising costs, the three private hospitals in the city only admitted to their emergency rooms persons who were true emergencies, or those who could pay the emergency room fee. Fayette County funds allocated for providing physician services, drugs, hospitalization and diagnostic tests to persons who were poor and lacked

coverage, averaged an estimated \$7 per year per needy person. Concurrent with these changes the University of Kentucky Medical Center was established. The Medical Center, which was assigned statewide responsibilities for health care, carried a large part of the local health care load. Everyone was seen in its emergency room irrespective of ability to pay. Its clinics, however, operated only five days a week, from 9 a.m. to 4 p.m., and required the patient to spend many hours awaiting services. The problem grew rapidly with 16,000 local persons cared for in the emergency room in 1968, 40,000 (projected) in 1972.

Lexington has a relatively high concentration of physicians and hospital beds. It might, therefore, be thought that the problem was one primarily of transporting patients from the north side of town to health facilities on the south side.

It is true that for a low-income family, transportation is one barrier to health care; however, there are many others. Consider the case of a mother whose child awakens at night with a high fever and earache. There is a transportation problem: how is she to bring the child to the emergency room of the Medical Center on a cold, winter night with no buses running, no car available, and taxi fare prohibitive? If she does get to the emergency room she will most likely be given a prescription. Where is she to find the money for the prescription? She will also, almost certainly be asked to return several days later to the Pediatric Clinic. At the Clinic she will be seen by a medical student—and follow-up is frequently poor, either due to rotation of student, house staff and faculty, or the failure of the patient to return as scheduled.

In discussing these problems, representatives

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of the community suggested that many of the local health needs cited could probably be best met by bringing health services into their neighborhood. In following this suggestion, the following philosophical features of the then newly developed OEO neighborhood health centers were adopted:

1— There would be community (neighborhood) involvement in the planning, development and operation of the proposed health system.

2— As many positions as possible in the proposed health system would be filled by persons from the neighborhood. The health system would operate an educational program to train neighborhood people for jobs, and provide upward mobility for members of the staff.

3— The system would provide comprehensive health services at times convenient to patients.

4— Primary health services would be delivered by a full-time, paid staff.

5— Health care would be oriented to the family.

6— "Family health workers" would help to couple the health system to the families it served.

It was recognized at this point that the hopes of low-income communities had often been raised only to be subsequently dashed. Thus, it was reasoned, either the project should be dropped or else it should be pursued no matter how much time or effort would be required. It was decided to proceed, and to persist. An immediate problem arose. If the community were to be involved in the planning, development and operation of the proposed health system, who represented the community? The following strategy was devised:

1. A neighborhood health council would be formed. This became the Northeast Lexington Health Council Inc., organized under by-laws which stipulated that all voting members of the council be residents of the target area. The by-laws also required that at least 2/3 of the members of the Board of Directors of the Health Council be residents of the target area.

2. The Council would aim at having at least one representative on every block of the target area.

3. Any neighborhood person could become a block representative and member of the Health

Council, provided (a) he completed a training program on community health services and the principles of organization of the Health Council, and (b) he went door-to-door on his block discussing the proposed health system with each family, filling out a health survey form for each household.

These stringent requirements for admission to the Health Council caused the recruitment process to be slow. At the end of two years the Health Council had 16 members. There were advantages to this, however. Members of the Council tended to be exceptionally dedicated, patient and hard-working, and had strong commitments to the goals of the project. It is interesting to note that nearly all the members of the Health Council were individuals who had not previously been active in community affairs. Although many attempts were made to recruit them, persons already in leadership roles in the community were not attracted to the work of the Health Council.

It was felt from the very beginning, that a health system of this magnitude would not be viable or effective unless it had deep roots in the community. A systematic effort was therefore developed to bring churches and service clubs behind the effort. These organizations were asked for moral, not material support. The motley crew of representatives of churches, service clubs, the University of Kentucky, the wider community, the Health Council and various community action groups, formed an informal association called "Healthy Neighborhoods". Healthy Neighborhoods was not an organization in the usual sense; it did not have a set of elected officers. Its structure was kept purposely loose to enable it to ultimately turn the work over to a more appropriate body.

In the fall of 1969, biweekly "Discussions on the Delivery of Health Care (with special reference to poverty problems)" were instituted. The function of these discussions was to focus professional expertise on health problems of low-income communities.

Directors and other representatives of health institutions in the county, as well as representatives from the target community, were invited to attend a first meeting which was to be devoted to how these discussions might be organized. The first meeting was turbulent as divergent lines of thinking clashed. This led some to doubt whether it would, in fact, be



possible to have discussions with such a wide range of participants. Inexplicably, the second meeting was peaceful and constructive. Thereafter harmony reigned throughout the series, a period of over a year. Possibly the following quotation appearing on the notice which announced the second meeting was an influence for the good: "I will give you a talisman. Whenever you are in doubt, or when the self becomes too much . . . try the following . . . : Recall the face of the poorest and most helpless man whom you may have seen, and ask yourself if the step you contemplate is going to be of any use to *him*. Will he be able to gain anything by it? Will it restore to him control over his own life and destiny? In other words will it lead to . . . self-rule for the hungry and also spiritually starved . . . of our countrymen? Then you will find your doubts and your self melting away." (*M. K. Ghandi in a letter to a friend.*)

Out of these discussions the general outlines of the proposed health system began to emerge. It was during this period, also, that professional societies were invited to appoint advisory committees. Representatives of the Pharmaceutical Society and the Dental Society, for example, outlined policies for pharmacy and dental services, respectively. These policies were so fundamental and sound, that they still dominate current thinking. During this period new features of the proposed health system emerged: 1—Every person using the system would be asked to pay something according to his means. 2—To assure that families would be able to get health services when they are sick, the system should operate on a prepaid basis, with enrolled families paying a certain amount each month to maintain enrollment, just as they pay rent on a monthly basis to maintain shelter. 3—To avoid a dual health system the proposed system would be open to non-poor families. This would help to bring about one standard of health care. Families with low incomes would have their premiums subsidized; others would be expected to bear the full cost.

Under the leadership of the Fayette County-Lexington Health Department, and in collaboration with the Ohio Valley Regional Medical Program, the Blue Grass Regional Health Planning Council and the Department of Community Medicine of the University of Kentucky, a health survey was made in Fayette

County to obtain the data needed for the design of the proposed health system.

In February, 1970, a representative group of health professionals began meeting one afternoon each week to work on the actual design of the proposed health system. This planning group, in spite of its efforts, was not able to devise a concrete plan and budget for the proposed health system. In retrospect this was possibly due to the fact that no one in the group had had practical experience with a health system of this kind.

In April, 1969, a federal agency suggested that an application for a planning grant be submitted to it. Such an application was filed but was neither approved nor rejected. Several months later the agency requested that a description of the proposed health system be submitted to it. The Council approached a new faculty member of the Department of Community Medicine, University of Kentucky College of Medicine, to write a description because of his experience with neighborhood health centers. This individual agreed to draft, in his free time, a proposal incorporating policies developed by the Council over the previous two-and-a-half years. A plan and budget for a neighborhood health center to serve 15,000 persons on the northeast side of Lexington emerged from this effort. After this proposal was submitted, the agency advised the Health Council, however, that it would seriously consider such a proposal only if there were a group of local physicians willing to take the responsibility for the development of the proposed system, and for the recruitment of physicians.

In December, 1970, a meeting between a representative of the Office of Health Affairs of the Office of Economic Opportunity (OEO) and representatives of key local health organizations was held at the office of the Dean of the College of Medicine, University of Kentucky. The assembly was informed that OEO was less interested in developing isolated neighborhood health centers, than in developing regional health networks. The latter would utilize existing local health resources to the greatest possible extent, and would provide to the enrolled population full health services, including hospitalization, on a capitated basis. An organization ("foundation") representative of the

region to be served, would have to be formed. The physicians ("providers"), who formed the nucleus of the proposed health system, would occupy a portion of the seats of the board of trustees of the new foundation. If the project wished to compete for a health network grant, a preliminary draft of a grant proposal would have to be submitted to OEO before February 1, 1971.

The Northeast Lexington Health Council considered these possibilities. In its previous plans, health services were restricted to families living within specified geographic boundaries. This restriction led to some uneasiness among project participants, as it would mean having to turn away needy persons residing outside the boundaries. The new plan would not suffer from this disadvantage. It would, however, require either, that the Health Council turn over the entire project to a new organization, or that it itself reorganize, and, in the process lose its identity. In spite of the real and deep disappointment in not being able to operate the new health system, the Health Council decided to help form a new organization, and called a public meeting for this purpose. In early January a new organization, later called the Hunter Foundation for Health Care, Inc., came into being. The University of Kentucky Medical Center, the Fayette County Medical Society and a group of physicians operating a group practice in Lexington, were invited to become the "provider" part of the proposed network. The Medical Center and the Medical Society accepted this invitation.

The Hunter Foundation has a Board of Trustees containing 36 seats. Six seats are occupied by persons appointed by the University of Kentucky Medical Center. Six others are occupied by persons appointed by the Fayette County Medical Society. These 12 seats constitute the *Provider Section* of the Board. The *Consumer Section* consists of 12 seats. At present these are filled at an annual meeting of representatives of organizations representing the low-income sector of our county. When the Foundation begins to deliver health care, persons enrolled in the Hunter Foundation will select the Consumer Section representatives from among themselves. The last 12 seats constitute the *At-Large Section* of the Board. Two of these seats are filled by County and City government. The balance

are filled upon recommendation of a nominating committee consisting of the At-Large Board Members plus four Consumer and four Provider Board members. Exactly one third of the seats of each committee of the Board are allocated to each of the three sections of the Board, and each section of the Board appoints its own representatives to each committee.

At the very same time that the Hunter Foundation saw its beginnings, work was begun on a grant proposal for the proposed health network. A preliminary draft of this proposal, containing a complete budget, was submitted February 1, 1971. The final draft was submitted April 15, 1971. In July, 1971, the grant was approved and funded.

It is of interest that the program received a remarkable amount of local support during the relatively long period of its development, and encountered no opposition. Although no fund-raising was carried out, material support was showered upon the project.

1) In the early stages of development, the Lexington Friends Meeting, a local church group provided the small sums necessary for mailing and incorporation.

2) Subsequently, without applying for this, the Northeast Lexington Health Council found itself recipient of a grant of approximately \$1,000 a month to help its planning efforts.

3) Contributions in terms of meeting places, office space, professional assistance, health surveys, etc. probably exceeded \$50,000.

4) Robert Stephens, Judge of the Fayette County Fiscal Court, offered to help obtain a building in which the Hunter Foundation could begin to deliver services.

5) Louie B. Nunn, then Governor of the Commonwealth of Kentucky, warmly endorsed the Hunter Foundation proposal, and stated that he would do everything in his power to help Judge Stephens obtain the proposed building for the Foundation.

In the course of our work we learned a few principles conducive to good human relationships in the development of a community project:

*Openness.* Nearly all meetings were well-publicized, held in public buildings (mostly in the target area), and were open to anyone. The project also published a bulletin, "The Health Herald", which detailed the transactions of each meeting and the viewpoints presented.



All new ideas, as they arose, were immediately ventilated to the whole mailing list which included names of potential adversaries. There was no attempt to suppress or hide ideas which might be unpalatable to powerful groups in the community. There was no secrecy: all of the information was available to anyone.

*Avoidance of Criticism.* In the course of this work project participants came into contact with many institutions. These institutions, as do all institutions, had many obvious shortcomings. The project made it a point not to criticize institutions, or to put pressure on them to change. This policy was not merely a matter of prudence, but reflected a certain philosophical understanding. It is much easier to criticize, than to do better. The proposed health system would, no doubt, also fall far short of its ideals, and have many shortcomings. Finally, if you think you know how to do something, do it yourself, don't expect someone else to do it for you.

*Time.* Until December 15, 1970, that is for the first three years of its history, the project moved at a leisurely pace. No one worked under pressure of time, and it was jokingly assumed that it would require a hundred years to achieve the stated objectives. This slow development turned out to be a blessing, though quite a number of well-meaning persons, criticized the project for not getting anything done. (Predictions were made, that if some concrete results were not soon achieved, the target community would lose interest. Interestingly enough, the target community showed seemingly limitless patience; it was middle-class participants and onlookers who were disturbed.) Why was a slow but steady pace so important? A project of this kind requires an inordinate amount of communication, yet information develops and disseminates only very slowly. There must be ample time for feedback. Hence, the greater the effort, the more people one wants to involve, the more time is required if one seeks genuine involvement, and wishes to avoid misunderstandings. There is a good deal of injustice in writing off, as reactionary, a person who is initially opposed to a seemingly humanitarian effort. His opposition is likely to be based on some truths. There is a need for time to allow him to modify his views; or for him to modify the views of the project.

*Equality of participation.* Great pains were taken to see that the project did not become identified with, or the property of, any previously existing institution. This permitted these institutions to participate side-by-side on an equal plane, and led to a fine working relationship among their representatives.

Only the newly formed Northeast Lexington Health Council had, by general agreement, a proprietary relationship to the outcome of the work.

*"The Sense of the Meeting".* Policies were evolved by developing consensus, rather than by formal vote. This avoided the development of hostile minorities within the group. The development of a consensus was easier to achieve than might be thought. There are so many constraints on developing a comprehensive health care system for low-income families, that if there is sufficient time for reasoning, there is generally only one solution at a given time that is clearly optimum for a given problem. No viewpoint was ever immediately turned down or suppressed. Many conflicting proposals co-existed for long periods of time. It was interesting to observe startling changes in viewpoint occurring in a number of participants. Toward the beginning of the project, for example, quite a number of persons felt that the given problem could best be solved by providing transportation to existing clinics and emergency rooms. This idea faded as more innovative solutions came into focus.

*Freedom.* Individual project participants were given great freedom as to what they did in the project and how they did it. If someone thought a certain course of action desirable, he did not have to spend time convincing others, but was able to pursue the idea himself, and if successful, would win over the support and assistance of others. This led to a relaxed, creative atmosphere with a great deal of camaraderie, affection and trust among participants.

*Working from the bottom up.* In the early stages, most of the energy and resources of the project were devoted to organizational development and conceptual clarification in the target community. No attempts were made to obtain publicity, or to obtain the backing of powerful groups. As each level developed, a natural pathway developed to the next higher level. As this course was followed, it was never



anticipated, as actually was the case, that the County Judge and the Governor of the State would become involved. Conservative individuals, who often tend to be critical of projects of this kind, became supportive when they found that the people who were to benefit by the project were in true need, and were working hard toward its goals. Political power is arranged in the form of a pyramid, the higher one goes, the greater its concentration. Moral power, however, can be found at every level.

The short history presented here might lead readers to believe that Lexington, Kentucky is a heavenly city where goodwill exists among citizens to an extent not known elsewhere in our world. While Lexington is indeed a very nice city, readers might reflect upon the fact that shortly prior to the beginning of the project, two attempts at developing very limited improvements to the health system for low-income families rapidly aborted. A highly experienced local community organizer advised project participants that they were wasting their time, for it would be impossible to develop the proposed health system under existing political conditions. A community health specialist agreed with this assessment; he felt that the local health profession societies were "the most

conservative in the country." Yet, a member of the Fayette County Medical Society, who was to become one of its presidents, became actively involved in the project early in its history. He was one of the architects of the health plan which was devised, and served in a liaison capacity between the project, the Medical Society and other institutions. In February, 1971, members of the Fayette County Medical Society voted by a ratio of 5 to 1 to become a part of the nuclear provider group of the Hunter Foundation health system, and pledged their full support to its development.

The ability of our citizens to work together in harmony and friendship has been greatly underestimated.

This is how a group of low-income persons, in search of better health care, brought a new concept of health care to a whole community.

Among the health organizations which played a considerable role in the project were the University of Kentucky Medical Center, the Fayette County-Lexington Health Department, the Ohio Valley Regional Medical Program, the Fayette County Medical Society, the Blue Grass Pharmaceutical Association, the Blue Grass Dental Society and the Blue Grass Regional Health Planning Council.

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**You won't want to miss Doctor Leslie Blakey  
speak on the Hunter Foundation at the KMA  
Interim Meeting, March 29-30. See program  
pages 192-193.**



## EDITORIALS



### Medicare Appeals Process FIRST LEVEL

**R**ecent changes in the appeals process available to Medicare beneficiaries when they disagree with an adverse determination on their claim for Part A benefits demand some discussion and clarification to avoid any misunderstanding of the Intermediary's role in the administration of the Medicare program in Kentucky.

When Medicare came into being in 1966, the Kentucky Medical Association through its Title XVIII Committee, insisted that the authority to reject claims be vested in a physician rather than in paramedical or lay personnel. This recommendation was implemented and no claim is rejected until it has been reviewed and a determination made by the Medical Consultant.

If the beneficiary disagrees with that determination, a request for reconsideration may be filed with the Social Security Administration. Although not provided for in the Medicare law, **SSA, by administrative action**, established a Reconsideration Branch, in Baltimore, to provide a second level of review on the basis that this process parallels their policy in other Social Security programs. When such an application was received, the entire medical records, together with related correspondence, was forwarded to Baltimore. The beneficiary was then notified of the results of this reconsideration—to affirm, to reverse or to partially reverse the Intermediary's determination.

Now, all of this has been changed. The Social Security Administration decided that, effective February 12, 1973, the Intermediary must perform its own reconsiderations. If it refuses, or proves to be incapable of performing this task, the responsibility would be delegated to the state agency or some other Intermediary.

Kentucky Blue Cross opposed this concept, but, as with many other Federal programs, had no choice. Every effort will be made to assure a completely independent and

objective review of claims when reconsideration is requested.

The complete medical record, correspondence and any additional information provided by the patient, the facility or the attending physician, will be reviewed by a different nurse than the one who performed the initial review. Pertinent new information affecting the level of care or ancillary services required or received by the beneficiary will be referred to the Medical Consultant or, when possible, to another physician before a decision is reached.

The Intermediary shares the concern which, no doubt, will be voiced by many that this procedure really does not represent an independent review. That we have tried very conscientiously in the past to make certain that our initial determinations were fair, equitable and in accordance with the provisions of the law, may be attested to by the fact that our judgments have been reversed by the Reconsideration Branch in only one per cent of the cases sent to Baltimore. We will continue to try just as conscientiously to fulfill this new responsibility in the administration of an increasingly complex Medicare program.

Further levels of appeal are provided in the law. If the beneficiary disagrees with the reconsideration decision, request may be made for review by the Bureau of Hearings and Appeals. If that decision is unacceptable, and certain dollar minimums are involved, the matter may be taken to the Court of Appeals. At each stage in the processing of a Medicare claim, in the event of an adverse determination, the beneficiary is informed of the next step in the appeals mechanism available to him or her.

We will be pleased to answer any questions of KMA members on this or other matters related to the Medicare Part A program.

HENRY B. ASMAN, M.D.

MEDICAL CONSULTANT, MEDICARE DIVISION  
KENTUCKY BLUE CROSS



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**BUTISOL Sodium provides highly predictable sedative effect:** minor dosage adjustments are usually all that's needed to produce the desired degree of sedation. (With 3 dosage forms and 4 strengths to make adjustments easy.)

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These are four good reasons for prescribing BUTISOL Sodium for the many patients who need to have the pace set just a little slower. Its gentle daytime sedative action is often all that's needed to help the usually well-adjusted patient cope with temporary stress.

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**Contraindications:** Porphyria, sensitivity to barbiturates, or susceptibility to dependence on sedative-hypnotics. **Warning:** May be habit forming. **Precautions:** Exercise caution in: moderate to severe hepatic disease; withdrawal in drug dependence or the taking of excessive doses over a long period, to avoid withdrawal symptoms; elderly or debilitated patients, to avoid possible marked excitement or depression; use with alcohol or other CNS depressants, because of combined effects. **Adverse Reactions:** Drowsiness at daytime sedative dose levels, skin rashes, "hangover" and gastrointestinal disturbances are seldom seen. **Usual Adult Dosage:** For daytime sedation, 15 mg. to 30 mg. t.i.d. or q.i.d. For hypnosis, 50 mg. to 100 mg. **Available as:** Tablets, 15 mg., 30 mg., 50 mg., 100 mg.; Elixir, 30 mg. per 5 cc. (alcohol 7%). BUTICAPS<sup>®</sup> [Capsules BUTISOL SODIUM (sodium butabarbital)] 15 mg., 30 mg., 50 mg., 100 mg.

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## Placidyl® (ETHCHLORVYNOL)

### Brief Summary

**Indications**—Placidyl (ethchlorvynol) is indicated as short-term hypnotic therapy in the management of insomnia.

**Contraindications**—Drug hypersensitivity and porphyria.

**Warnings**—Not recommended during the first and second trimester of pregnancy. Caution patients of possible combined exaggerated effects with alcohol, barbiturates, tranquilizers or other CNS depressants. Exaggerated effects might result in blurring of vision, paralysis of accommodation and profound hypnosis. Caution patients concerning driving a motor vehicle, operating machinery, or other hazardous operations requiring alertness after taking the drug. Administer with caution to patients with suicidal tendencies and do not prescribe large quantities of the drug. Adjustment of the dosage of oral anticoagulants might be necessary when beginning ethchlorvynol therapy, during therapy, or after stopping therapy. This drug is not recommended for use in children. PLACIDYL HAS THE POTENTIAL FOR THE DEVELOPMENT OF PSYCHOLOGICAL AND PHYSICAL DEPENDENCE. INSTANCES OF SEVERE WITHDRAWAL SYMPTOMS, INCLUDING CONVULSIONS AND DELIRIUM CLINICALLY SIMILAR TO THOSE SEEN WITH BARBITURATES, HAVE BEEN REPORTED IN PATIENTS TAKING REGULAR DOSES AS LOW AS 1000 MG. PER DAY OVER A PERIOD OF TIME WHEN THE DRUG WAS SUDDENLY DISCONTINUED. PROLONGED ADMINISTRATION OF THE DRUG IS NOT RECOMMENDED. Addiction-prone patients or those who are likely to increase dosages of the drug on their own initiative should be observed for evidence of signs or symptoms which may indicate possible early withdrawal or abstinence symptoms. Signs and symptoms associated with withdrawal and abstinence include unusual anxiety, tremor, ataxia, slurring of speech, memory loss, perceptual distortions, irritability, agitation and delirium. Other less well defined signs and symptoms, not necessarily due to withdrawal and abstinence, may include anorexia, nausea or vomiting, weakness, dizziness, sweating, muscle twitching and weight loss. Abrupt discontinuance of Placidyl following prolonged overdosage may result in convulsions and delirium.

**Precautions**—Toxic amblyopia has been reported with long-term continuous use of ethchlorvynol. Permanent visual defects have been observed, although amblyopia has improved after discontinuation of the drug. Drug dosage should be limited for elderly and debilitated patients to the smallest effective amount. If pain is present, this drug should only be given if insomnia persists after pain is controlled with analgesics. Caution is advised in prescribing the drug for patients who are being treated with either MAO inhibitors or antidepressants. Transient delirium has been reported with the combination of Placidyl and amitriptyline. Drug dosage should be reduced if prescribed for patients receiving MAO inhibitors or antidepressants. Caution should be exercised in patients with impaired hepatic or renal function. Patients who respond unpredictably to barbiturates or alcohol, or who exhibit excitement and release of inhibition in association with such agents, may also react in this way to Placidyl. Rarely, patients may exhibit symptoms suggestive of an unusual susceptibility to the drug; such as prolonged hypnosis, profound muscular weakness, excitement, hysteria, or syncope without marked hypotension. Transient giddiness or ataxia may occur.

**Adverse Reactions**—Hypotension, nausea or vomiting, gastric upset, aftertaste, blurring of vision, dizziness, facial numbness, and allergic reaction typified by urticaria have been reported following Placidyl administration. Mild "hangover" and symptoms of mild excitation have occurred in some patients. There have been rare reports of cholestatic jaundice occurring in patients taking ethchlorvynol. A few cases of thrombocytopenia have been reported in patients receiving ethchlorvynol. 302430R



## Give us her nights.

Prescribe Placidyl. Chances are, we'll give her a good night's sleep.

Insomnia is often associated with emotional disturbance. Emotional problems might be the cause . . . or the effect. In time that can be determined. But tonight, one fact is painfully clear: she needs sleep.

When sleep is synonymous with therapy, remember . . . Placidyl is synonymous with sleep. It has been for over 17 years.

If time is the criterion to inspire your confidence . . . you can rest assured with Placidyl.

Prescribed by physicians for over 17 years.

**Placidyl®**  
(ETHCHLORVYNOL CAPSULES, 500 or 750 mg.)





## ORGANIZATION SECTION



### KMA 1973 Interim Meeting Program Is Highlighted By Qualified Speakers and Informative Discussions

Congressman M. Gene Snyder, Louisville, will be a featured speaker at the 1973 KMA Interim Meeting held March 29 and 30 at Lake Barkley Lodge in Cadiz.



Congressman Snyder

A member of the U. S. House of Representatives from the Fourth District, Congressman Snyder will speak on "Congress' Continuing View of Health Care" during the dinner session on Thursday evening, March 29.

The KMA Interim Meeting, which will officially begin with registration beginning at 8:00 a.m. on March 29, will primarily deal with discussions on the challenges faced by the medical profession in the delivery of quality health care.

A panel discussion on Thursday morning will look at various approaches to health care delivery. Moderated by Walter I. Hume, Jr., M.D., Louisville, the panel is composed of five Kentucky physicians who will deal with foundations, small and large society approaches, private health care and group practice.

Tom E. Nesbitt, M.D., Nashville will present AMA's view on the delivery of health care. Doctor Nesbitt is the Vice-Speaker of the AMA House of Delegates and is a Past President of the Tennessee Medical Association.

How the health profession "measures up" in health manpower, costs and insurance will be the topic of discussion by Joseph C. Hamburg, M.D., Lexington; Lowell H. Steen, M.D., Hammond, Ind.; and Harold B. McGuffey, Commissioner of Insurance for Kentucky.

The afternoon will be free of meetings so that physicians and their families may take advantage of the recreational facilities offered by the resort park.

Friday morning's session will begin with opening remarks by Fred C. Rainey, M.D., Elizabethtown, KMA President-Elect. "Current Trends in Health Care" will be the theme of the morning program and will be expounded through talks about consumer interests, the hospital's role, the physician's role and Congress' attitudes. Participants in this discussion will be Robert V. Bullock, Frankfort; Wade Mountz, Louisville; John H. Budd, M.D., Cleveland, and James W. Foristel, Washington, D.C.

Robert E. Rinehiemer, President of Pennsylvania

Blue Shield, will discuss the role of the insurance commissioner at 10:30 a.m. on March 30, followed by a challenging address on "Where Do We Go From Here" by David A. Hull, M.D., Lexington, President of the Kentucky Foundation for Medical Care.

A question and answer period will follow at the close of the Friday morning program.

Lee C. Hess, M.D., Florence, KMA President, urges all Kentucky physicians to attend this important and informative Interim Meeting and to bring their families to enjoy the facilities at Lake Barkley Lodge. A reservation form for the Lodge is on page 199 for your convenience.

### KAFP Plans 22nd Annual Meeting May 9-12 in Louisville

The Kentucky Chapter, American Academy of Family Physicians will hold its 22nd Annual Scientific Assembly May 9-12 at Ramada Inn/Bluegrass Convention Center, Louisville, according to D. V. Hollingsworth, M.D., Georgetown, Chairman for the 1973 Assembly.

Adolph Rupp, former University of Kentucky basketball coach, will be the featured speaker of the annual banquet held Friday evening, May 11. Other well-known guest speakers include William J. Myers, from the AAFP Headquarters in Kansas City, Mo.; Gerald Kien, M.D. and Wei-Chi Liu, M.D., both of Chicago, and Ed Tyler, M.D., Madison, Wis.

Some of the topics to be discussed during the scientific session by state and national speakers include acupuncture, computer electrocardiography, genetics, fertility evaluation and osteopathy. Luncheon seminars will be offered on Thursday and Friday at which pre-registration is required.

The session will also include two meetings of the KAFP Congress of Delegates and the installation of officers.

### KMA Nominations Committee To Meet at Interim Mtg.

The Nominating Committee, which will receive your nominations for KMA officers for the 1973-74 Associational year, will meet during the Interim Meeting at Lake Barkley Lodge. A special table will be reserved during the evening dinner session on March 29 for the Committee and you are urged to visit the table and make your feelings known on this particular subject.





Doctor Hume



Doctor Brockman



Doctor Brewer



Doctor Caudill

## Program

### "The Challenge of Health Care Delivery"

## KMA 1973 Interim Meeting

March 29 and 30

Lake Barkley State Resort Park, Cadiz

### THURSDAY MORNING SESSION

March 29

Lee C. Hess, M.D., Florence, KMA President, Presiding

8:00 a.m. Registration

8:45 a.m. Call to Order—Doctor Hess

9:00 a.m. Panel Discussion—"Some Approaches to Health Care Delivery"

Walter I. Hume, Jr., M.D., Louisville, Moderator

*Hunter Foundation*—Leslie W. Blakey, M.D., Lexington

*Small Society Efforts to Improve Health Care*—George F. Brockman, M.D., Greenville

*A Large County Society Approach*—McHenry S. Brewer, M.D., Louisville

*The Success of Private Health Care*—W. Neville Caudill, M.D., Louisville

*Large Group Practice*—Dan A. Martin, M.D., Madisonville

10:30 a.m. "The View From AMA"—Tom E. Nesbitt, M.D., Nashville, Tennessee  
Vice-Speaker, AMA House of Delegates

11:00 a.m. "How Do We Measure Up?"

*Health Manpower*—Joseph C. Hamburg, M.D., Lexington  
Chairman, KFMC Health Manpower and Placement Services Committee

*Health Costs*—Lowell H. Steen, M.D., Hammond, Indiana  
Chairman, AMA Committee on Community Health Care

*Health Insurance*—Harold McGuffey, Frankfort  
Commissioner of Insurance, Commonwealth of Kentucky

12:00 noon Adjourn Morning Session



Doctor Nesbitt



Doctor Hamburg



Doctor Steen



Commissioner McGuffey





Mr. Bullock



Mr. Mountz



Doctor Budd

## THURSDAY EVENING SESSION

March 29

Doctor Hess, Presiding

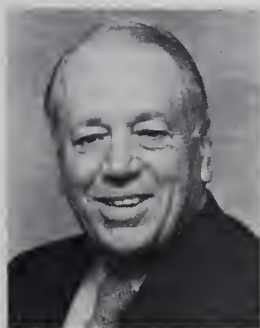
- 6:00 p.m. Social Hour—Hosted by the Pennyryle Medical Society
- 6:45 p.m. Dinner
- 7:45 p.m. "Congress' Continuing View of Health Care"—Honorable M. Gene Snyder, Louisville  
Member, U.S. House of Representatives

## FRIDAY MORNING SESSION

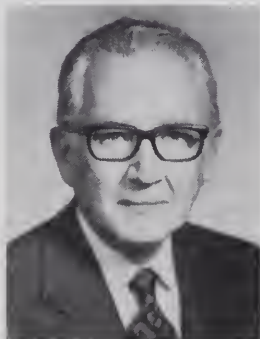
March 30

Fred C. Rainey, M.D., Elizabethtown, KMA President-Elect, Presiding

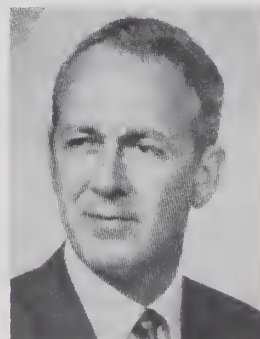
- 8:45 a.m. Call to Order—Doctor Rainey
- 9:00 a.m. "Current Trends in Health Care"  
*Consumer Interests*—Robert V. Bullock, LL.M., Frankfort  
 Assistant Attorney General, Commonwealth of Kentucky  
*Hospital's Role*—Wade Mountz, Louisville  
 President, Norton-Children's Hospital  
*Physician's Role*—John H. Budd, M.D., Cleveland, Ohio  
 Member, AMA Board of Trustees  
*Attitude of Congress*—James W. Foristel, LL.B., Washington, D. C.  
 AMA Washington Office
- 10:30 a.m. "The Insurance Commissioner"—Robert E. Rinehiemer, Camp Hill, Pennsylvania  
 President, Pennsylvania Blue Shield
- 11:00 a.m. "Where Do We Go From Here"—David A. Hull, M.D., Lexington  
 President, Kentucky Foundation for Medical Care
- 11:30 a.m. Question and Answer Session
- 12:00 noon Closing Remarks—Doctor Hess



Mr. Foristel



Mr. Rinehiemer



Doctor Hull



Participants and guests attending the KMA Conference on Medical Education, held February 1 and 2 in Elizabethtown, listen to various speakers discuss the dual responsibility of the practicing and academic physician in medical education. Participating in the biannual meeting were representatives of the faculties of the University of Louisville and the University of Kentucky medical schools, the KMA Board of Trustees and the KMA Medical Education Committee.

## AMA Replies To Announcement On Phase III Price Controls

In reply to President Nixon's January 11 announcement concerning Phase III Price Controls, the Chairman of the AMA Board of Trustees, John R. Kernodle, M.D., issued a statement of physician concern over the continued government control over the health industry. He indicated that "such pressures will inevitably have an effect on both the quantity and quality of health services in this nation."

Health care providers must now purchase supplies from industries not restricted by price controls and must compete for personnel under wage handicaps.

Doctor Kernodle said, "When controls were first imposed on health care 13 months ago, the AMA urged physicians to comply . . . Right now, however, we may have to reconsider that attitude."

Physicians' fees increased 1.37% during the first nine months of Phase II (as reported in the *Journal of KMA*, November, 1972) which was less than one-third of the pre-Phase I rate, well within the goal of the Economic Stabilization Program. Yet, as Doctor Kernodle states, "Today, we face the prospects of mandatory controls despite the fact that physicians have demonstrated during Phase I and II that they can keep prices under control through voluntary compliance."

## Applications Being Received By Scholarship Fund

The Rural Kentucky Medical Scholarship Fund is now accepting applications for loans for medical students entering school this fall. The applicant must be a Kentucky resident who has been admitted to an accredited medical school.

G. L. Simpson, M.D., Greenville, Chairman of the Fund, notes that this year the Fund will loan up to \$2,500 per year (an increase of \$500) to

applicants who will agree to practice in rural Kentucky one year for each loan received and \$3,000 per year to those who agree, prior to their first loan, to locate in one of ten critical counties in which the need is greatest at the time they establish practice. The ten critical counties are selected each year by the Board of Trustees of the Fund.

Created in 1946 to provide better distribution of physicians in rural areas of Kentucky, the Fund now has about 173 physicians in practice with 18 serving in critical counties.

Students interested in learning more about the program should write the Rural Kentucky Medical Scholarship Fund, 3532 Ephraim McDowell Drive, Louisville, Kentucky 40205, prior to April 1, 1973.

## FDA Issues Warning About X-ray Dealer Claims

The Food and Drug Administration's Bureau of Radiological Health has recently learned that some x-ray dealers have been advising physicians and other users of x-ray equipment that all existing x-ray equipment will have to be upgraded to meet requirements of a new radiation safety performance standard effective August 15, 1973. Such advice is contrary to fact.

Upgrading of x-ray equipment now being used is not now required by the standard. State and territorial radiation control authorities have been asked by the Bureau to so inform equipment users and dealers.

Although equipment now in use will not have to be modified before the standard becomes effective, owners installing manufacturer-certified components in such x-ray systems after next August 15 must install components of the type called for by the Federal standard.

Additional information about the standard may be obtained from the Division of Electronic Products, Bureau of Radiological Health, Food and Drug Administration, 12720 Twinbrook Parkway, Rockville, Maryland 20852.

## Awards Committee Is Now Accepting Nominations

Richard F. Grise, M.D., Bowling Green, Chairman of the KMA Awards Committee, announces that the Committee is now accepting nominations for the Kentucky Medical Association Award and the Distinguished Service Award.

The KMA Award is designed to honor an outstanding layman and the Distinguished Service Award honors the outstanding physician of the year. The awards are presented annually at the President's Luncheon held during the KMA Annual Meeting in September.

Award nominations should be forwarded to the KMA Headquarters Office, 3532 Ephraim McDowell Drive, Louisville, Kentucky 40205, and marked: "Attention: Awards Committee."

# Encounter under the Scanning Electron Microscope



## SEM reveals changes in *E. coli* exposed to antibacterial agents

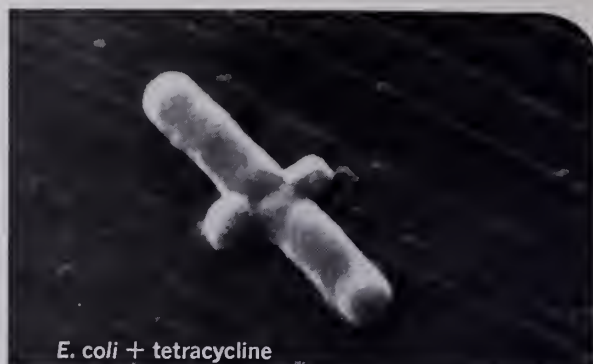
The Scanning Electron Microscope (SEM) is the only instrument which gives 3-dimensional views on a microscopic level. This permits the surface morphology of microorganisms to be observed in

detailed perspective. Changes in surface morphology of *E. coli* exposed to various antimicrobial agents are seen on the following page. An SEM photomicrograph of normal control *E. coli* appears above.





*E. coli* + sulfamethoxazole



*E. coli* + tetracycline



*E. coli* + cephalothin



*E. coli* + ampicillin

## Different modes of antibacterial action — Similar changes in morphology

As part of a series of experiments,<sup>1-3</sup> strains of *E. coli* proven susceptible to each antibacterial agent were exposed to 1 MIC of the respective antibacterials for a three-hour period. Included were cell-wall-active drugs, ampicillin and cephalothin; a drug interfering with intracellular protein synthesis, tetracycline; and a chemical agent which acts by interference with para-aminobenzoic acid, sulfamethoxazole.

As seen above, elongation of the bacilli, mid-cell defects and spheroplast-like forms may be appreciated with the SEM technique. These changes in bacterial morphology were similar... regardless of the antibacterial agent used and irrespective of

its mechanism of action.

"At present, the significance of these observations in clinical infection must be considered with caution, but it is hoped that these data will stimulate a reevaluation of present concepts of the nature and role of morphological variants of bacteria exposed to a variety of antibacterial factors."<sup>2</sup>

It should be noted that no clinical conclusions can be drawn from this study, as it is not always possible to extrapolate *in vitro* data to humans.

**References:** 1. Klainer, A. S.; Fass, R. J., and Perkins, R. L.: Scientific Exhibit presented at the 25th American Medical Association Clinical Convention, New Orleans, La., Nov. 28-Dec. 1, 1971. 2. Klainer, A. S., and Perkins, R. L.: *Antimicrob. Agents Chemother.*, 1:164, 1972. 3. Klainer, A. S.: Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media.** The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

**Contraindications:** Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

**Warnings:** Safety during pregnancy has not been estab-

lished. Sulfonamides should not be used for group A beta hemolytic streptococcal infections and will not eradicate prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom drug-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

**Adverse Reactions:** Blood dyscrasias (agranulocytosis)

# Encounter in Clinical Practice

## Control of primary bacterial offenders

Antibacterial Gantanol® (sulfamethoxazole) controls susceptible strains of *E. coli* and other gram-negative and gram-positive organisms

often implicated in acute nonobstructed pyelonephritis and cystitis.

## Prompt antibacterial blood and urine levels

In from 2 to 3 hours after the initial 2-Gm adult dose, antibacterial levels are present in

both the blood and urine.

## B.I.D./T.I.D. dosage for around-the-clock coverage

Subsequent 1-Gm doses provide up to 12 hours of antibacterial coverage. More severe u.t.i. may require a q.8h. dosage regimen. Either schedule provides coverage during the waking

and sleeping hours—especially important during hours of sleep when normal urinary retention tends to favor bacterial proliferation.

## Also effective in nonobstructed chronic and recurrent u.t.i.

It is not uncommon for the elderly and the debilitated to develop chronic and/or recurrent nonobstructed urinary tract infections such as pyelonephritis and cystitis. Such cases often re-

spond satisfactorily to Gantanol. The increasing frequency of resistant organisms is a limitation of usefulness of antibacterial agents including sulfonamides, especially in chronic or recurrent u.t.i.

## Your Option: Tablets or Suspension

Either dosage form—the Tablets or the pleasant-tasting, cherry-flavored Suspension—can provide the dependable antibacterial activity necessary to control susceptible nonobstructed cystitis and pyelonephritis. Symptomatic improvement may usually be expected in 24 to 48 hours. The usual precautions with sulfonamide

therapy should be observed, including adequate fluid intake. Gantanol (sulfamethoxazole) is generally well tolerated with relative freedom from complications; the most common side effects are nausea, vomiting and diarrhea. Frequent c.b.c.'s and urinalyses with microscopic examination are recommended.

**In nonobstructed cystitis and pyelonephritis due to susceptible organisms**

**Gantanol®**  
(sulfamethoxazole)  
**Basic Therapy**

plastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thy-

roid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

**Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age** (except adjunctively with pyrimethamine in congenital toxoplasmosis).

**Usual adult dosage:** 2 Gm (4 tabs or teasp.) initially, then 1 Gm b.i.d. or t.i.d. depending on severity of infection.

**Usual child's dosage:** 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs b.i.d. Maximum dose should not exceed 75 mg/kg/24 hrs.

**Supplied:** Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.



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Nutley, N.J. 07110



## Rheumatic Disease Symposium Scheduled for April 19

"Current Topics in Rheumatology" will be the theme for discussions at the Ninth Annual Symposium on Rheumatic Diseases, April 19, according to David H. Neustadt, M.D., Louisville, chief of section on rheumatic diseases, University of Louisville School of Medicine.

Included in the guest faculty were Gerald Weissmann, M.D., professor of medicine, New York University; Naomi Rothfield, M.D., head of arthritis section, University of Connecticut, and Thomas Weiss, M.D., Ochsner Clinic, New Orleans and President-Elect of the American Rheumatism Association.

Recent research on the mechanism of inflammation in arthritis and newer laboratory procedures useful for the diagnosis of rheumatic diseases are only a few of the topics to be discussed. Panel discussions and active audience participation in question and answer sessions will be encouraged, Doctor Neustadt said.

The full-day conference, which will be held in the Health Sciences Center auditorium at the University of Louisville, is sponsored by the University of Louisville School of Medicine and the Kentucky Chapter of the Arthritis Foundation.

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## In Memoriam

**WILLIAM M. COX, M.D.**  
Corbin  
1888-1972

William M. Cox, M.D., died at the age of 84 in August of 1972. A 1912 graduate of the University of Louisville School of Medicine, Doctor Cox was a general practitioner in Corbin for many years. He was an emeritus member of the Kentucky Medical Association.

**HARRIS W. TERRELL, M.D.**  
Corbin  
1904-1972

Harris W. Terrell, M.D., died on December 13, 1972, at the age of 68. A general practitioner, Doctor Terrell was a 1928 graduate of the University of Louisville School of Medicine. He had retired from active practice in May, 1971. He belonged to the Whitley County Medical Society and the Kentucky and American Medical Associations.

**PAUL C. NEELY, M.D.**  
Louisville  
1897-1973

Paul C. Neely, M.D., 76, died on February 3, 1973. A general practitioner, Doctor Neely graduated from the University of Louisville School of Medicine in 1922 and practiced in Louisville for many years. He was a member of the Jefferson County Medical Society and the Kentucky Medical Association.

**WALTER I. HUME, SR., M.D.**  
Louisville  
1885-1973

Walter I. Hume, Sr., M.D., died on February 11 at the age of 87. A 1913 graduate of the University of Louisville School of Medicine, Doctor Hume served as KMA Vice-President in 1945 and as President of the Jefferson County Medical Society in 1934. He was Emeritus Professor of Surgery at the U of L Medical School and had taught there for more than 33 years.

He was a member of the American College of Surgeons, the International College of Surgeons, the Louisville Surgical Society and the Southeastern Surgical Congress.

**James W. Harkess, M.D.** and **Harold E. Kleinert, M.D.**, both of Louisville, will be featured speakers on the 17th Annual Postgraduate Course on Fractures and Other Trauma, held May 9-12 in Chicago. The annual program is sponsored by the Chicago Committee on Trauma of the American College of Surgeons. Topics to be discussed by the two Louisville surgeons include complications following cast application and recent advances in hand surgery.



### PHYSICIANS NEEDED

Family Practitioner and General Surgeon needed for rural area of Morganfield-Sturgis, Kentucky. Modern J.C.A.H. approved hospital in community. To arrange for a visit and assistance in getting practice started contact: *E. J. Ryan, Jr., Director, Medical Relations, Hospital Corporation of America, P.O. Box 550, Nashville, Tennessee 37203.*

### U.L. Dentistry, Medical Schools Sponsor Cancer Symposium

The Tenth Annual Symposium on Oral Cancer will be held March 17 in the auditorium of the Health Sciences Center of the University of Louisville School of Medicine. Sponsored by the Louisville Schools of Dentistry and Medicine, the one-day symposium will begin at 8:30 a.m.

"Diagnostic Trends in Cancer Detection" will be the topic of discussion by four well-known leaders in diagnosis and treatment. Ordie H. King, Jr., D.D.S., University of West Virginia; Bruno Kwapis, D.D.S., Southern Illinois University; Condict Moore, M.D., University of Louisville, and Thomas D. Stevenson, M.D., Ohio State University will treat various aspects of recent treatment and detection trends in oral cancer.

This continuing education program is acceptable for four prescribed credit hours by the American Academy of Family Physicians.

### Ky. Orthopedists To Hold May Interim Meeting

The Kentucky Orthopaedic Society will hold its annual interim meeting May 11 and 12 at the Rowntowner Motor Lodge, Covington.

The featured speaker, George Lucas, M.D., Madison, Wis., will speak on "Missile Wounds of the Bony Pelvis." Other highlights of the meeting include participation in Grand Rounds at the Cincinnati General Hospital and a short business meeting.

For further information contact James Harkess, M.D., Medical-Dental Building, 511 S. Floyd Street, Louisville, Ky. 40202.

### U.K. and Ky. Pediatricians Offer Postgraduate Course

The spring meeting of the Kentucky Chapter, American Academy of Pediatrics, will be held May 24 and 25 in conjunction with a postgraduate course sponsored by the Department of Pediatrics, University of Kentucky, Lexington.

Various aspects of the treatment of urinary tract infections will be discussed on Thursday, May 24 by Martin Randolph, M.D., Danbury, Conn. and several Lexington physicians. Charles Christian, M.D., New York, N.Y., will be the featured speaker on Friday, May 25. One of his topics will be "Juvenile Rheumatoid Arthritis."

**Note:** At press time, *The Journal* was informed that the Kentucky Industrial Medical Association will be holding their annual spring meeting on April 5, 1973.

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### KENTUCKY MEDICAL ASSOCIATION INTERIM MEETING, MARCH 29-30, 1973 REQUEST FOR ACCOMMODATIONS RESERVATION

Complete and mail directly to Lake Barkley State Resort Park, Cadiz, Kentucky 42211. Telephone (502) 522-3261.

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**Note:** This reservation is for the Kentucky Medical Association meeting, March 29-30, 1973.

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**Before prescribing, please consult complete product  
information, a summary of which follows:**

**Indications:** Nonobstructed urinary tract infections (mainly cystitis, pyelitis, pyelonephritis) due to susceptible organisms. **Important Note:** *In vitro* sensitivity tests not always reliable; must be coordinated with bacteriological and clinical response. Add aminobenzoic acid to follow-up culture media. Increasing frequency of resistant organisms limits usefulness of antibacterial agents, especially in chronic and recurrent urinary infections. Maximum safe total sulfonamide blood level, 20 mg/100 ml; measure levels as variations may occur.

**Contraindications:** Hypersensitivity to sulfonamides; infants less than 2 months of age; pregnancy at term and during the nursing period.

**Warnings:** Safety in pregnancy not established. Do not use for group A beta-hemolytic streptococcal infections, as sequelae (rheumatic fever, glomerulonephritis) are not prevented. Deaths reported from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias. Sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. CBC and urinalysis with careful microscopic examination should be performed frequently.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, severe allergy or bronchial asthma. Hemolysis, frequently dose-related, may occur in glucose-6-phosphate dehydrogenase-deficient patients. Maintain adequate fluid intake to prevent crystalluria and stone formation.

**Adverse Reactions:** *Blood dyscrasias:* Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia; *Allergic reactions:* Erythema multiforme (Stevens-Johnson syndrome), generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis; *Gastrointestinal reactions:* Nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis; *C.N.S. reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia; *Miscellaneous reactions:* Drug fever, chills and toxic nephrosis with oliguria and anuria. Periarteritis nodosa and L.E. phenomenon have occurred. Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

**Supplied:** Tablets containing 0.5 Gm sulfisoxazole.



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# THREE OTHER BUILT-IN BENEFITS OF GANTRISIN<sup>®</sup> sulfisoxazole/Roche<sup>®</sup>

## 3.

### High solubility at average urinary pH

Gantrisin's unusual solubility is the main reason for its relatively low toxicity. In both free and acetylated forms, it is highly soluble at urinary pH values of 5.5 to 6.5, so there is no need for prophylactic alkali therapy.

## 4.

### Rapid absorption

Gantrisin reaches its sites of action quickly. Measurable levels of the drug have been found in blood and urine within 60 minutes; in 2 to 3 hours, therapeutic levels usually have been reached.

## 5.

### Rapid renal clearance

Gantrisin's rapid excretion rate is another reason why it is generally well tolerated. Over 50% of a single oral dose is excreted in 8 hours, over 90% in 24 to 48 hours, so there is little risk of hematuria or crystalluria, and anuria is rare.

As with all sulfonamides, adequate fluid intake must be maintained. Complete blood counts and urinalyses, with careful microscopic examination, should be performed frequently.

For nonobstructed cystitis due to *E. coli*  
and other susceptible organisms

begin with

**Gantrisin<sup>®</sup>**  
sulfisoxazole/Roche<sup>®</sup>

Usual adult dosage:

4 to 8 tablets *stat*

2 to 4 tablets *q.i.d.*



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*"The history of science, and in particular the history of medicine... is... the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."*

*—George Sarton, from "The History of Medicine Versus the History of Art"*

**Are there significant  
differences in bioavailability  
and clinical predictability  
among drug products?**

**Opinion**

Results of a questionnaire to  
7,000 physicians:

**44.6%**

**Agree there is a significant  
difference**

**24.9%**

**Believe there is no difference**

**30.5%**

**Had no opinion**

## Are there significant differences in bioavailability and clinical predictability among drug products?

### Teacher of Medicine

Alfred Gilman, Ph.D.  
Wm. S. Lasdon  
Professor & Chairman  
Department of  
Pharmacology  
Albert Einstein  
College of Medicine of  
Yeshiva University



I think that there can be a very great distinction between generic drugs and brand name drugs. And that applies to products of original research that have outlived their patent protection as well as to drugs that have long been in the public domain. Let me explain why.

#### The Importance of the Manufacturing Environment

In terms of formulation, quality control, and the ability to reproduce an essentially identical product, batch after batch, I doubt that many firms are properly equipped to put out a product that is as carefully controlled as the product marketed by a pharmaceutical company with sophisticated research and high quality manufacturing facilities. For example, when a company comes out with its own preparation of a drug that has just lost its patent protection, there is no assurance that the drug it produces will be a therapeutic equivalent. The raw material could be identical and yet bioavailability might vary from complete unavailability to that which is equivalent to the original.

#### It Isn't Enough to Meet USP and NF Standards

Meeting USP and NF standards is not enough to guarantee therapeutic equivalence. In certain instances, stricter standards must be applied. Right now, the New York Heart Association has a committee that is studying the problem of digoxin equivalent

lency. I am certain that they are going to recommend a bioavailability assay of a particular digoxin. Unless this is done, they will not recommend it for purchase or use in New York City hospitals. It represents too much of a hazard. They have gone so far as to recommend a batch-by-batch certification of bioavailability even though the company has been reproducing and marketing a digoxin product through the years.

#### The Problem of Controlling Bioavailability of Generics

The FDA does not have the manpower to inspect the quality control capabilities of hundreds of houses specializing in generic products. And I don't think that the average pharmacist is knowledgeable or aware of the quality and bioavailability of the infinite numbers of generic preparations. A recommendation has been made that every time a generic house (or for that matter a large pharmaceutical company) markets an already existing drug for the first time, a modified new drug application should be submitted. The manufacturer would have to show that his compound is the therapeutic equivalent of the standard compound in use, assuming that the standard compound is one that has been available for an extended period—say 15 years. This would be one indication that the control of bioavailability is beginning to get the attention that it deserves.

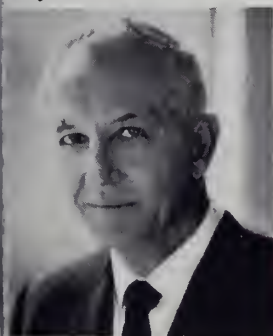
#### Clinical Predictability More Important Than Price

Although the question of price has been greatly exaggerated, it is true that patients can on occasion save money on generic drugs. But you are not going to dare attempt to save money if it jeopardizes the patient's health. Let's turn to the example that has become very prominent in recent years, that of the cardiac glycosides. These are probably the most toxic drugs we use with respect to the small difference between a maximally effective dose and a toxic dose. When you are dealing with drugs of this type, the first concern must be clinical predictability. At the risk of variations in bioavailability, it would be sheer folly to try to save the patient what might amount to maybe \$10 or \$20 a year. The physician cannot manage his patient unless he is sure that the drug he is prescribing has the same positive effect each time the prescription is renewed. This is especially significant when the patient takes the product, not for months but for the rest of his life.



## Maker of Medicine

C. J. Cavallito, Ph.D.  
Executive Vice President  
Ayerst Laboratories



Although equivalence of different preparations of a drug substance may be deduced by certain physical, chemical or biological characteristics, identity is not always assured even though these characteristics may be described in compendia such as the USP, NF or defined by other specific source standards. Moreover, even with equivalent drug substances, similar pharmaceutical products can be produced by different manufacturers such that these products are biologically or therapeutically equivalent.

### A Growing Awareness of Potential for Nonequivalence

As experience increases with drug substances derived from different sources and under different conditions, it should be possible to establish specifications in sufficient detail to minimize the potential for their nonequivalence. However, there is general agreement that product therapeutic equivalence would still not be assured even if one could

minimize nonequivalence of drug components produced by different manufacturers. Arguments relate largely to the extent of product inequivalences. Experience over the past six years has uncovered a greater incidence of nonequivalence of products prepared by different manufacturers from generically equivalent substances than many had previously surmised.

### Newer Bioavailability Studies Reveal Differences

Bioavailability may be defined as a measure of the rate and amount of absorption of a drug substance from its administered dosage form. For several years pharmaceutical scientists have proposed that bioavailability data on presumably equivalent dosage forms provide the best measure of product equivalence—short of adequate clinical trial. In their continued search for shortcuts to the evaluation of product equivalence, medical and pharmaceutical scientists have increasingly relied upon bioavailability characteristics as reflected by blood levels of a drug after its administration to human subjects.

Leading manufacturers now conduct comparative bioavailability studies on their own product dosage forms after production process changes that would have been considered inconsequential a few years ago. This isn't surprising, since there are so many possible differences in production operations that the opportunities for inequiva-

lent generic and brand name products are numerous—even when the production process begins with identical chemical substances. Moreover, reputable manufacturers are striving to improve *in vitro* control measures, such as dissolution characteristics, which are being related more meaningfully to bioavailability reference data.

As a result of advances in scientific instrumentation and analytical methodology which permit measurements of small quantities of drug substances in the body, our abilities to detect differences in bioavailability and possible therapeutic nonequivalence have appreciably improved.

### Product Selection

#### Based on Patient Response

Improved specifications and standards can better assure the equivalence of drug substances. Manufacturers, compendia and regulatory agencies can all play a part. However, it is the drug product, not the drug substance, that the physician, pharmacist, nurse and patient-customer utilize. How can these indi-

viduals make or influence specific product selections to minimize variations in therapeutic equivalence of multisource drugs? Patients' responses to a drug product provide a basis of experience to aid the physician in his selection of a particular product. The nurse and pharmacist can also help detect patient responses, but ultimate responsibility must remain with the physician.

### Reputation of Manufacturer as Basis for Product Selection

The physician, to assure that his patients receive quality health care, must rely upon the capabilities of the reputable pharmaceutical manufacturer who is equipped to develop, prepare and control a quality product of uniform, reliable therapeutic performance. Substitution with purportedly equivalent generic products that are only superficially evaluated by an imitator manufacturer can place the health of the patient secondary to factors of price or convenience for the provider.

## Opinion & Dialogue

What is your opinion, doctor?  
We would welcome your comments.



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## MINOCIN® made the difference in just eight days.\*

### Clinical Data:

**Patient:** 47-year-old male.

**Diagnosis:** Severe pyoderma, left hand.

**Culture:** *Staphylococcus aureus*, coagulase positive and sensitive to MINOCIN.

**Temperature:** 102° F

**Therapy:** MINOCIN Minocycline HCl Capsules, 100 mg: 200 mg *stat*, 100 mg every 12 hours. Medication began 9/7/71. By fourth day, temperature was normal and pustular lesions considerably improved. Last dose taken 9/14/71.

**Concomitant therapy:** None.†



Semisynthetic

**MINOCIN**  
**MINOCYCLINE HCl**

Capsules, 100 mg: 2 *stat*, 1 q 12 h.

**Indications:** For the treatment of susceptible infections; e.g., *E. coli*, *D. pneumoniae*. For full list of approved indications consult labeling.

**Contraindications:** Hypersensitivity to any tetracycline.

**Warnings:** The use of tetracyclines during tooth development (last half of pregnancy, infancy and childhood to the age of 8 years) may cause permanent discoloration of the teeth (yellow-gray-brown). This is more common during long-term use but has been observed following repeated short-term courses. Enamel hypoplasia has also been reported. Tetracyclines, therefore, should not be used in this age group unless other drugs are not likely to be effective or are contraindicated. In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, use lower total doses, and, in prolonged therapy, determine serum levels. Photosensitivity manifested by an exaggerated sunburn reaction has also been observed in some individuals taking tetracyclines. Advise patients apt to be exposed to direct sunlight or ultraviolet light that such reaction can occur, and discontinue treatment at first evidence of skin erythema. Studies to date indicate that photosensitivity does not occur with MINOCIN Minocycline HCl. In patients with significantly impaired renal function, the antianabolic action of tetracycline may cause an increase in BUN, leading to azotemia, hyperphosphatemia, and acidosis. CNS side effects (lightheadedness, dizziness, vertigo) have been reported, may disappear during therapy, and always disappear rapidly when drug is discontinued. Caution patients who experience these symptoms about driving vehicles or using hazardous machinery while taking this drug.

**Pregnancy:** In animal studies, tetracyclines cross the placenta, are found in fetal tissues, and can have toxic effects on the developing fetus (often related to retardation of skeletal development). Embryotoxicity has been noted in animals treated early in pregnancy. Safety of use during human pregnancy has not been established. **Newborns, Infants and children:** All tetracyclines form a stable calcium complex in any bone-forming tissue. Prematures, given oral doses of 25 mg./kg. every 6 hours, demonstrated a decrease

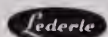
in fibula growth rate, reversible when drug was discontinued. Tetracyclines are present in the milk of lactating women who are taking a drug of this class.

**Precautions:** Use may result in overgrowth of nonsusceptible organisms, including fungi. If superinfection occurs, institute appropriate therapy. In venereal diseases when coexistent syphilis is suspected, darkfield examination should be done before treatment is started and blood serology repeated monthly for at least four months. Because tetracyclines have been shown to depress plasma prothrombin activity, patients on anticoagulant therapy may require downward adjustment of such dosage. Test for organ system dysfunction (e.g., renal, hepatic and hemopoietic) in long-term use. Treat all Group A beta hemolytic streptococcal infections for at least 10 days. Avoid giving tetracycline in conjunction with penicillin.

**Adverse Reaction:** GI: (with both oral and parenteral use): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in anogenital region. **Skin:** maculopapular and erythematous rashes. Exfoliative dermatitis (uncommon). Photosensitivity is discussed above ("Warnings"). **Renal toxicity:** rise in BUN, dose-related (see "Warnings"). **Hypersensitivity reactions:** urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus. In young infants, bulging fontanels have been reported following full therapeutic dosage, disappearing rapidly when drug was discontinued. **Blood:** hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia. **CNS:** (see "Warnings.") When given in high doses, tetracyclines may produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

**NOTE: Concomitant therapy:** Antacids containing aluminum, calcium, or magnesium impair absorption; do not give to patients taking oral minocycline. Studies to date indicate that absorption of MINOCIN is not notably influenced by foods and dairy products.

\*Indicated in infections due to susceptible organisms. Culture and sensitivity testing recommended. Tetracyclines are not the drugs of choice in the treatment of any staphylococcal infection. †Case Report, Clinical Investigation Department, Lederle Laboratories.



LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 10965 12-20 436-2



# IN ASTHMA IN EMPHYSEMA



*optional  
therapy*



## **THE** mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications** are listed above. **MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with  $\frac{1}{2}$  to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

### **MUDRANE—original formula** *First choice*

### **MUDRANE-2** *When ephedrine is too exciting or is contraindicated*

### **MUDRANE GG** *During pregnancy or when K.I. is contraindicated or not tolerated*

### **MUDRANE GG-2** *A counterpart for Mudrane-2*

### **MUDRANE GG ELIXIR** *For pediatric use or where liquids are preferred*

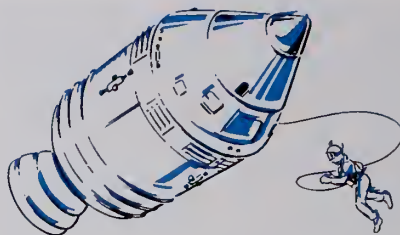
*Clinical specimens  
available to physicians.*

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

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Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . a prophylaxis to prevent kidney or bladder calculi.

# Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, 300 mg.; SODIUM ACID PHOSPHATE, 500 mg.

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages

complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

## **Dosage:**

*For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.*

*2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.*

*A clinical supply will be sent to physicians and hospitals on request.*



WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

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## acute arthritic inflammation...heat that freezes

In acute rheumatoid arthritis consider Tandearil. The anti-inflammatory action of Tandearil quickly helps reduce heat, pain, swelling, and stiffness. Results are usually seen in 3 or 4 days. Try it for a week when the symptoms defy aspirin control.

Remember that Tandearil is not a simple analgesic. It should not be used on patients responding to routine therapy. Before using, please read the prescribing information. It's summarized below.

## Tandearil® helps take the heat off oxyphenbutazone NF Geigy

Tablets of 100 mg.

**Important Note:** This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions (symptoms of blood dyscrasias); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

**Indications:** Acute gouty arthritis, rheumatoid arthritis, rheumatoid spondylitis.

**Contraindications:** Children 14 years or less; senile patients; history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia; history or presence of drug allergy; blood dyscrasias; renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema; stomatitis and salivary gland enlargement due to the drug; polymyalgia rheumatica and temporal arteritis; patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

**Warnings:** Age, weight, dosage, duration of therapy, existence of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against po-

tential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylureas, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic end toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmologic examination. Swallowing of ankylosis or feces in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

**Precautions:** The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or on every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukopenia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that erythritic-type pains can be the presenting symptom of leukemia.

**Adverse Reactions:** This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia,

gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, eosinocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukopenia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthritis, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granuloma, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hypoplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusion, states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement. (B)98-146-800-F (10/71)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals  
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Ardley, New York 10502

# He won't resist feeling better with **Mylanta<sup>®</sup>**

Because the taste is good.

- ☐ promptly relieves hyperacidity
- ☐ also relieves fullness and bloating
- ☐ non-constipating



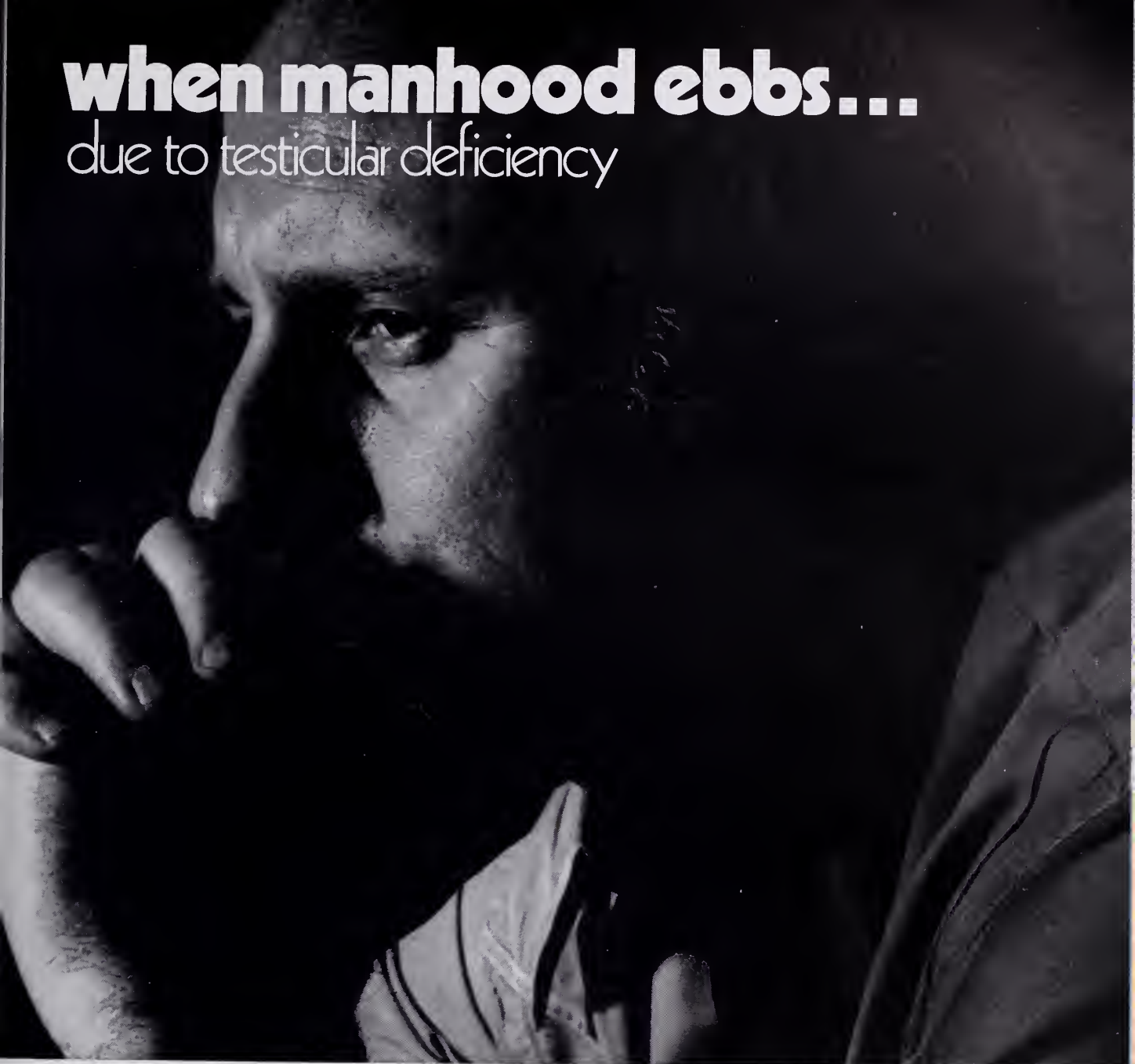
LIQUID **MYLANTA<sup>®</sup>** TABLETS

aluminum and magnesium hydroxides with simethicone



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**when manhood ebbs...**  
due to testicular deficiency

# Halotestin® 5 mg tablets

fluoxymesterone, Upjohn

## oral hormone replacement with parenteral-like potency

**Halotestin® Tablets—2, 5 and 10 mg**  
(fluoxymesterone Tablets, U.S.P., Upjohn)

**Indications in the male:** Primary indication in the male is replacement therapy. Prevents the development of atrophic changes in the accessory male sex organs following castration:

**1.** Primary eunuchoidism and eunuchism. **2.** Male climacteric symptoms when these are secondary to androgen deficiency. **3.** Those symptoms of panhypopituitarism related to hypogonadism. **4.** Impotence due to androgen deficiency. **5.** Delayed puberty, provided it has been definitely established as such, and it is not just a familial trait.

**In the female:** **1.** Prevention of postpartum breast manifestations of pain and engorgement. **2.** Palliation of androgen-responsive, advanced, inoperable female breast cancer in women who are more than 1, but less than 5 years post-menopausal or

who have been proven to have a hormone-dependent tumor, as shown by previous beneficial response to castration.

**Contraindications:** Carcinoma of the male breast. Carcinoma, known or suspected, of the prostate. Cardiac, hepatic or renal decompensation. Hypercalcemia. Liver function impairment. Prepubertal males. Pregnancy.

**Warnings:** Hypercalcemia may occur in immobilized patients, and in patients with breast cancer. In patients with cancer this may indicate progression of bony metastasis. If this occurs the drug should be discontinued. Watch female patients closely for signs of virilization. Some effects may not be reversible. Discontinue if cholestatic hepatitis with jaundice appears or liver tests become abnormal.

**Precautions:** Patients with cardiac, renal or hepatic derangement may retain sodium and water

thus forming edema. Priapism or excessive sexual stimulation, oligospermia, reduced ejaculatory volume, hypersensitivity and gynecomastia may occur. When any of these effects appear the androgen should be stopped.

**Adverse Reactions:** Acne. Decreased ejaculatory volume. Gynecomastia. Edema. Hypersensitivity, including skin manifestations and anaphylactoid reactions. Priapism. Hypercalcemia (especially in immobile patients and those with metastatic breast carcinoma). Virilization in females. Cholestatic jaundice.

#### How Supplied

**2 mg**—bottles of 100 scored tablets.

**5 mg**—bottles of 50 scored tablets.

**10 mg**—bottles of 50 scored tablets.

For additional product information, see your Upjohn representative or consult the package circular.

MED 8-6-5 (MAN)

# Librium® and (chlordiazepoxide HCl) concomitant use

Librium (chlordiazepoxide HCl) is used as adjunctive antianxiety therapy concomitantly with certain specific medications of other classes of drugs, such as cardiac glycosides, anti-hypertensive agents, diuretics, anticholinergics and antacids.

**Antianxiety effectiveness:** Demonstrated in a broad range of psychologic and physical dysfunctions; indicated when reassurance and counseling

are not enough and until, in the physician's judgment, anxiety has been reduced to tolerable, appropriate levels.

**Effect on mental acuity:** Usually minimal on proper maintenance dosage.

**Safety:** An excellent clinical record. In general use, the most common side effects reported have been drowsiness, ataxia and confusion, particularly in the elderly and debilitated.

**in relief of clinically  
significant anxiety**

**Librium®  
(chlordiazepoxide HCl)**

**5-mg, 10-mg, 25-mg capsules  
up to 100 mg daily in  
severe anxiety**

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Relief of anxiety and tension occurring alone or accompanying various disease states.

**Contraindications:** Patients with known hypersensitivity to the drug.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

**Precautions:** In the elderly and debili-

tated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

**Adverse Reactions:** Drowsiness, ataxia and confusion may occur, especially in the

elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

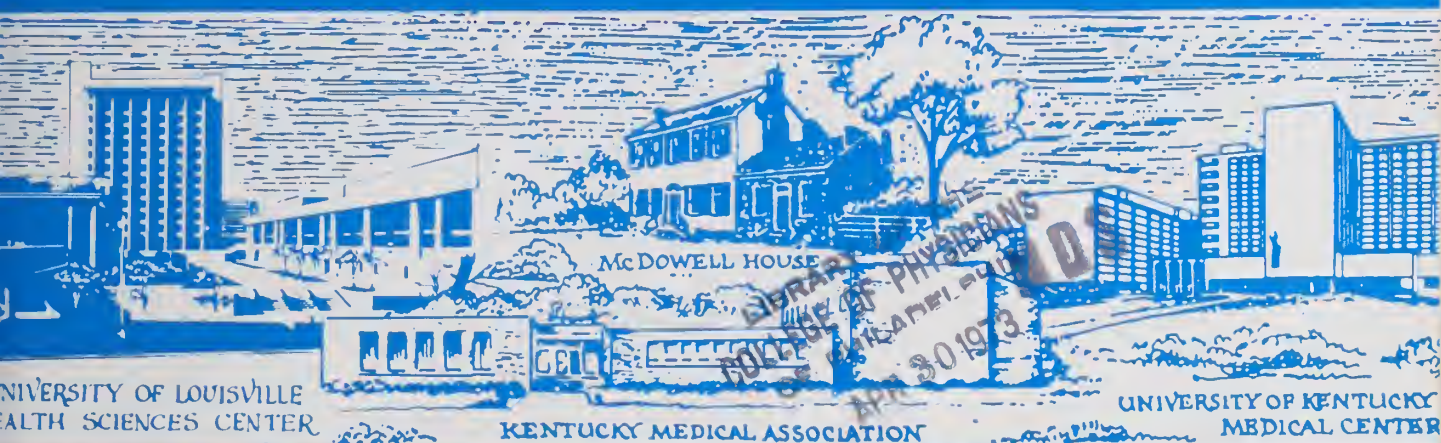
**Supplied:** Librium® capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.



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*The Journal of The*  
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*Medical Association*



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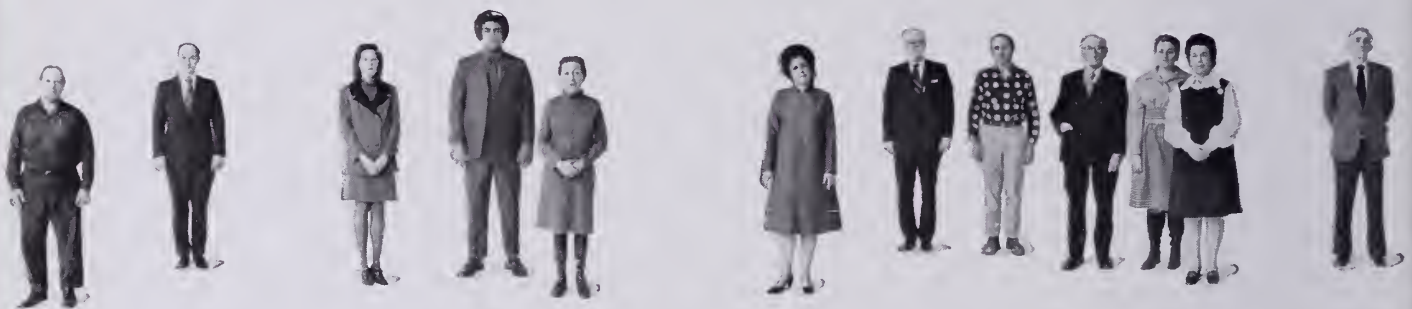




Everybody experiences psychic tension.



Most people can handle this tension.



Some people develop excessive psychic tension and need your counseling,



and a few may need counseling  
*and* the psychotropic action of Valium® (diazepam).

Before deciding to make Valium (diazepam) part of your treatment plan, check on whether or not the patient is presently taking drugs and, if so, what his response has been. Along with the medical and social history, this information can help you determine initial dosage, the possibility of side effects and the ultimate prospects of success or failure.

While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anti-convulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

**Dosage:** Individualize for maximum beneficial effect.

**Adults:** Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

**Supplied:** Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose® packages of 1000.



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# Valium® (diazepam)

To help you manage excessive psychic tension



# The Rx that says "Relax"

**BUTISOL Sodium provides highly predictable sedative effect:** minor dosage adjustments are usually all that's needed to produce the desired degree of sedation. (With 3 dosage forms and 4 strengths to make adjustments easy.)

**BUTISOL Sodium offers prompt, smooth, relatively non-cumulative action:** begins to work within 30 minutes...yet, because of its intermediate rate of metabolism, generally has neither a "roller-coaster" nor a "hangover" effect.

**BUTISOL Sodium is remarkably well tolerated:** a 30-year safety record assures you that there is little likelihood of unexpected reactions.

**BUTISOL Sodium saves your patients money:** costs less than half as much as most commonly prescribed sedative tranquilizers.\*

These are four good reasons for prescribing BUTISOL Sodium for the many patients who need to have the pace set just a little slower. Its gentle daytime sedative action is often all that's needed to help the usually well-adjusted patient cope with temporary stress.

\*Based on surveys of average daily prescription costs.

**Butisol** SODIUM  
(SODIUM BUTABARBITAL)

**Contraindications:** Porphyria, sensitivity to barbiturates, or susceptibility to dependence on sedative-hypnotics. **Warning:** May be habit forming. **Precautions:** Exercise caution in: moderate to severe hepatic disease; withdrawal in drug dependence or the taking of excessive doses over a long period, to avoid withdrawal symptoms; elderly or debilitated patients, to avoid possible marked excitement or depression; use with alcohol or other CNS depressants, because of combined effects. **Adverse Reactions:** Drowsiness at daytime sedative dose levels, skin rashes, "hangover" and gastrointestinal disturbances are seldom seen. **Usual Adult Dosage:** For daytime sedation, 15 mg. to 30 mg. t.i.d. or q.i.d. For hypnosis, 50 mg. to 100 mg. **Available as:** Tablets, 15 mg., 30 mg., 50 mg., 100 mg.; Elixir, 30 mg. per 5 cc. (alcohol 7%). BUTICAPS® [Capsules BUTISOL SODIUM (sodium butabarbital)] 15 mg., 30 mg., 50 mg., 100 mg.

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Volume 71 • April 1973

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# Journal of The KENTUCKY Medical Association

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#### APRIL BUYERS GUIDE FOR JOURNAL OF KMA 1973

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# MESSAGE FROM THE PRESIDENT

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**T**HE old song "As Times Goes By" seems to be appropriate in some respects as I write this President's Page. We are halfway through the 1972-73 Associational year and I think it is time to ask ourselves some serious, thought-provoking questions.

Have we, as physicians, been lax in our effort to build a new foundation for our profession and have we attempted to blame someone else when goals we set are not accomplished? Are we going to attempt to lay a new foundation for improved medical care in our State and in our Nation in the months and years ahead? Are we going to seek a greater unity of purpose in all that we attempt to do? Can we, by seeking this unity, do all that is possible to achieve our stated goals? If we have attempted to blame someone else for our failures, if we have failed to unify our actions and purposes, then we must have a new beginning and respond to the challenges ahead.

I would like to quote from the very first President's Page I wrote. In that message I stated, "It is my sincere hope that this year will mark the beginning of the time when every physician in Kentucky becomes a viable and active member of *your* Association." The year is half gone but "tomorrow is the first day of the rest of your life." How you use it in your profession and your Association will, in fact, determine whether we effectively meet the challenges that are ahead.

*Lee C. Hesse, M.D.*



# A Link in the Chain

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## Effectiveness in Unity

Individually and collectively, women are in the forefront of politics, history, women's lib and most anything mentioned today. As physicians' wives we must be alert to the problems which concern other people in other walks of life. Too often we find ourselves in a sterile situation where we don't allow ourselves to think or to be prodded into discussions with those who believe in other aspects of health care delivery, national health insurance, availability of physicians, cost of medical care, etc.

This was particularly brought to my attention earlier this week when I attended a Congress on the Quality of Life in the Middle Years in Chicago sponsored by the AMA and other interested organizations. The purpose of the Congress was designed to increase the public awareness of the importance of the Middle Years (25-65) and to stimulate intergroup action on the national, regional, state and local levels.

Participating were union officials, model cities' representatives, health departments, institutions such as colleges, nursing schools, medical schools, physicians, physicians' wives, sociologists, etc. Health care and health care delivery including national health insurance are definitely interests of all the above mentioned and many of their views are far from compatible with yours and mine.

I point this out to allow you to realize you cannot continue to believe **BECAUSE** but that you must be educated to the point where you can lend credence to your views so they can be transmitted to others.

After the Chicago conference, I traveled to Washington where the AMPAC Workshop offered sessions on ways to not only increase PAC membership, but also presented Senators and others who spoke on health care and what we can expect in this session of Congress. The consensus is that health insurance will not be enacted this year because the tax and trade reforms are first on the agenda. This gives you more time for more clout with your neighbors, your friends—start with the easy—and then on to those who are not in agreement, in fact, are hostile. As the old song says "accentuate the positive." Emphasize the parts in Mediredit that are acceptable and then educate.

The '73 version of Mediredit is a clarification and extension of catastrophic coverage and free dental care for children two to six years. It is felt that a combination of Mediredit and the Administration's bill will probably be the eventual bill.

From surveys made in different parts of the country, it was discovered the image of the individual physician is very good; physicians collectively, good, but not as good; organized medicine, even less. This all points to the fact that the personal touch is still the best way to communicate (Masters and Johnson agree with that) and that despite the physician being busy, he and his wife must be ambassadors for medicine on a person-to-person basis.

How to be effective in your community should be our concern and primary interest; unity not as a body necessarily but in spirit and mind. Common goals are vital, necessary and desirable.

Surely in the midst of a busy day in a busy world, you can take time to help yourself and your patients. Plant a seed in the interest of medicine.

Add another credit to our women. The WA-KMA won a second place award for having the greatest percentage of auxiliaries belonging to their pact movement—KEMPAC.

MRS. GEORGE P. SCHAFER, PRESIDENT,  
WOMAN'S AUXILIARY to KMA

# *The Kentucky Foundation for Medical Care*

## Continuing Education: Practices and Attitudes of Kentucky Physicians 1972

FRANK R. LEMON, M.D.\*

**B**EGINNING about 1968 there developed a considerable effort to organize, systematize and increase the availability of useful educational opportunities for physicians in Kentucky. This effort has extended not only to defining and developing the subject matter to be made available, but also to the methods of presenting such material. The post of Associate Dean for Continuing Education at the University of Kentucky, College of Medicine was established in 1968—devoted to that specific activity. The University's commitment to the enterprise was marked by its provision of the basic salary and operational support which makes that activity possible. Subsequently the University of Louisville Medical Center also began to develop and focus more attention on this area, first by assigning a specific responsibility for such activity in the Department of Community Medicine, and later establishing a post as Director of Continuing Education in the office of the Dean, School of Medicine.

The continuing education effort throughout Kentucky, and the adjacent region, was enabled, beginning in 1969, to develop much more rapidly and to extend opportunities away from the Medical Center into the communities where physicians live and practice. This was accomplished by substantial support from the Ohio Valley Regional Medical Program. It is deplorable that with the program now beginning to move into high gear, the federal government is apparently dismantling the RMP effort nationally, disbanding the Ohio Valley Regional Medical Program (OVRMP) here. It

discontinues support for a program which has meant increased educational opportunities for physicians, delivered at lower than actual cost to them, and beneficial to the public they serve.

During the last two years there has been a growing sense of need among physicians on the Medical Education Committee of the KMA, continuing education directors of the universities and major hospitals, faculties of the medical centers and the OVRMP staff for information regarding the practices and interests of KMA physicians in regard to continuing education. For this reason, a survey of the continuing education attitudes and practices, and the needs, of Kentucky physicians was jointly conducted by the continuing education offices of the universities and the OVRMP. It is the purpose of this summary communication to report some of the major findings of that survey which was simultaneously under the sponsorship of the KMA. Preliminary reports have earlier been directed to the officers and trustees of KMA.\*

During January and February of 1972, a questionnaire was mailed to the 2,800 KMA doctors actually involved in patient care. Three hundred and five (305) of these were selected for interview on a stratified, random basis as a carefully designed representative sample of the total membership in terms of practice locations and specialties, age, sex and number of years in practice. As is usually the case, response from the sample group was more complete than that from the total group. However, in

\*A copy of additional analyses of this study, as prepared for the KMA Board is available on request to the author at the University of Kentucky Medical Center.

\*Chairman, KMA Committee on Medical Education

comparing the overall results and the answers to specific questions, it was found that there was essentially no difference in the profiles of the two groups or their responses to major questions. Moreover, the profile information for respondents and non-respondents were in close correspondence. Therefore, we feel reasonably confident that the information obtained represents, in the proportions indicated, the opinion of the KMA membership in regard to continuing education to the extent that it was investigated by this questionnaire.

In every study by questionnaire, one of the underlying problems is the questions themselves. Is the detail adequate or pertinent? Is the question understood equally by all participants? Is it possible to generalize the responses, or are the questions of such a nature as to make generalization impossible or improbable? Finally, one always has to ask are the conclusions reached by the investigators supported by both the data and the interpretation placed on them? In this instance a deliberate effort was made to be sure that the questionnaire was answered completely and understood uniformly by the sample group. Questionnaires were mailed to them as to all Kentucky physicians but with a special request to complete the document and hold it awaiting a telephone call from a trained interviewer. We were able to contact every physician in this group with rare exception. We found interest, understanding and cooperation, again, with few exceptions.

**Table 1**  
KMA Study Groups  
by Response

Categories	Mail	Sample
Net Number	2495 (100%)	305 (100%)
Responded	1031 ( 42%)	262 ( 86%)
Incomplete or No response	1164 ( 58%)	33 ( 14%)

We present here a portion of the results of that study based on the 262 respondents from the sample, but with the implication that the consensus of their responses seems to fit very well with that of the total group and thus we believe the sample is representative of KMA physicians as a whole. The overall response rate is noted in Table I.

### Results

The survey is concerned with several aspects of the practices, desires, needs and attitudes toward continuing education (C.E.); its fi-

nancing and its essentiality to continuing qualification as a physician.

The bulk (90%) of practicing KMA physicians, are between ages 30 and 59, with the median falling between 40 to 49 years. The median number of years in practice is between 15 and 19, two-thirds of Kentucky physicians have practiced under 25 years. There were 9 (3%) women in the sample group, seven of whom responded to the survey. Half of our physicians are located in population groups of 50,000 or more, a third in towns or centers of less than 10,000.

The distribution of Kentucky physicians by specialty is shown in Table 2. In contrast to the national scene almost 40% (20% nationally) are engaged in general or family medicine. It is conceivable that substantial numbers of those involved in general internal medicine, surgery and pediatrics are also providing primary care. It is thus likely that 50% or more of Kentucky's physicians are either totally or mainly practicing as primary physicians.

**Table 2**  
Distribution of Sample Physicians by Specialty

	No.	%
Internal Medicine	19	7.3
Subspecialty (IM)	24	9.2
General Surgery	22	8.4
Subspecialty (Surgery)	29	11.1
Psychiatry	7	2.7
Obstetrics and Gynecology	14	5.3
General Practice	95	39.3
Family Practice	8	
Pediatrics	22	8.4
Other	22	8.4
TOTAL	262	100

We began by asking as a rough current indicator of C.E. activity how many "continuing education courses" the physician had been involved in during the prior year. About one-fourth had taken the time to participate in more than one course, 50% in none. As busy as physicians are it would seem more efficient to provide, and to engage in, more learning opportunities in or near the practice location. It is usually more logical also, since such educational encounters tend to focus more on those things that are pertinent to the physicians day to day activities. Yet despite a national trend in this direction, likely to be encouraged by PSRO and continuing education requirements mandated in some form, 60% of our physicians preferred to leave their area and go to a major medical center for their continuing edu-



**Table 3**  
Distribution of Physicians By Most Used Method of Obtaining Continuing Education

	1st	2nd	3rd	TOTAL	WEIGHTED TOTAL
Medical Reading	154	43	20	217	568
State & National Med. Soc. Mtgs.	21	45	42	108	195
Formal CE Courses	21	28	32	81	151
Audio Tape Records	27	20	25	72	146
Informal Conversations with Peers	6	30	39	75	117
Consultations	5	28	34	67	105
Hospital Staff Meetings	4	23	22	49	80
Local Medical Society Meetings	4	19	7	30	57
Medical School Faculty in Community	1	6	9	16	24
Correspondence Course	4	2	3	9	19
Medical TV Programs	0	1	5	6	7

cation. We do not know how much of this response reflects a need to leave the site of practice both for a rest and to be free of distractions and how much of it reflects a judgment that both learning and teaching will be "better" in a medical center setting.

There are many ways to learn. For several years continuing medical educators have wrestled with the question, what is the best way to do this job, in terms of method? KMA physicians were asked to rank their most used methods of obtaining continuing education, in general, and more specifically the techniques which they preferred. (Tables 3 and 4) It is perhaps unfortunate that we did not also ask which of these methods they thought was the most effective. We thus are not sure as to whether the rankings reflect preference, or only a selection of the best of what is available or a combination of both attitudes.

As has been the case in many other surveys, it is apparent that **reading** continues to be a method of high preference. Coupled with the use of audio tapes, correspondence courses, consultations and informal conversations, it is apparent that there continues to be much reliance on the simplest self-instructional approaches. Since there have been few opportunities for exposure in this State to the newest sophisticated forms of computer or other source generated self-instructional programs no information was obtained or sought in that area. We note that a variety of meetings and courses at both central and local levels received significant endorsement. There are recognized problems in the transferral of information through courses and conference sessions. There are even greater problems in assessing whether what is transferred has any effect on the practice performance of the physician. But there are equally large questions as to whether physicians will se-

lect and read efficiently and rapidly only what they need and, more importantly, read it critically and interpret it appropriately—given today's voluminous mixed bag full of tripe and trivia containing only scattered gems.

The ranking of techniques for the presentation of material seems to indicate that physicians perceive that understanding what is being presented is more likely to occur in a less formalized setting than the lecture. Thus, the give and take of panel presentations, or the exposure to seeing as well as hearing, all seem to rank high with physicians, including the one to one experience of supervised clinical practice or the tutorial "mini-residency". It is not clear to us, however, from the way in which the questions were asked or arranged how physicians would have ranked their preferences in regard to the teaching techniques (in terms of their learning impact) as compared with the individualized learning situations reflected in Table 3 (e.g. reading, individual study, etc.)

Kentucky physicians indicated that the principal obstacles to their educational effort were the inability (because of practice or family commitments) to leave their location, or at least to retreat from its demands, and devote unrestricted attention to learning for a committed period of time. Almost a third indicated they had either no, or inadequate, coverage for their practices, 22% by some definition of their own, indicated that there was "lack of C.E. opportunity in their area"; 30% that when C.E. opportunities were available they were scheduled at "inconvenient times". The latter is of course a major problem since there is never a time which is "convenient" for all or even a major segment of the practicing population. It was encouraging to note that only small percentages felt that what they had been exposed to was either unsatisfactory, had cost excessively or did not fit their needs at all.

We are all aware of the ever-changing, explosively increasing field of medical knowledge. It is part of the basic problem in tackling the task of keeping up-to-date. Some effort was made to determine the level of interest in types of informational material. Also a comparison was made of the interest in new ideas versus expanding one's concepts and skills in his own narrower field of practice or reviewing and reinforcing that fund of knowledge with which the physician generally operates. We found the concern with and interest in these three general areas to be rather equal. There was substantially less concern with taking the time to learn about and understand the less clinical and more organizational concepts of how medicine may be practiced in varying medical care delivery systems or arrangements. This does not seem unnatural given the physician's usual preference for clinical concepts, and the clinical care of patients, with which he is primarily concerned—and which was the subject of the overwhelming mass of his initial educational experiences. However, the complexity of proposed and currently promoted alternatives to solo and small group practice arrangements, alternatives which have advantages and disadvantages for both patients and physicians, are such that they cannot be readily understood without substantial commitment of learning time and effort by physicians. Questions then arise as to whether educators have a role and a responsibility in the area of non-clinical continuing education. How will practicing physicians grapple with the problem of decisions regarding future practice forms without being forced to make decisions which err because they have not had the time to learn about the pros and cons of these developments?

With the limitations of time available to both practicing physicians and educators for continuing education, and because of a parallel concern by physicians and the public in regard

to the quality of physician performance, another basic question has arisen. How can we improve the efficiency of the continuing education effort? What is the advantage, if any, to a physician's devotion of a minute or an hour to hearing about a subject, learning a diagnostic process or therapeutic procedure which has little application in his own practice? Given the time limitations can he identify the target on which he ought to focus the limited and precious commodity which he has available for this learning effort—**time**? The decision in that regard should be left with the practicing physician, but can he make a proper decision based on his intuition? If it is not to be left to hunch how can he make the determination on facts? How can he assemble data that will diagnose his need and help him to organize an effective continuing education effort?

One answer to these kinds of questions has been the development of self-assessment examinations. By this means a physician can determine for himself areas of weakness (and strengths also) in his knowledge. He can relate this knowledge assessment to his kind of practice and determine to what he ought to devote more attention. Thirty-six percent (36%) of Kentucky's physicians have already taken such examinations. Seventy percent (70%) of our respondents felt that the KMA should take a strong leadership role in helping physicians to develop and participate in self-assessment examinations.

Yet another approach is related to the growing movement toward self-audit, peer audits and other approaches tied in with documentary evidence of participation in such activities. The purpose of documentation in turn has been related by a number of state societies (and it is the subject of public and governmental concern at several levels) with the continued qualification of physician for membership on hospital staffs, in professional societies such as the

**Table 4**  
Distribution of Physicians By Techniques of Presentation

	1st	2nd	3rd	Total	Weighted Total
Group Discussion	58	56	35	149	321
Panels and Symposia	40	52	42	134	266
Demonstration	60	32	15	107	259
Lecture	29	34	42	105	197
Supervised Clinical Practice	19	16	27	62	116
Film	11	27	21	59	108
Audio Tape	16	13	25	54	99
Medical TV Program	4	6	18	28	42
Laboratory Experience	4	4	5	13	25



KMA and the AMA, or even interval recertification in his specialty, or relicensure. A surprising 64% endorsed mandatory and verified continuing education effort as a qualification for various kinds of professional relationships—one-third endorsing it as a qualification for continued licensure to practice. (Fig. 1) Of those who had previously taken self-assessment tests, 76% endorsed some form of mandatory and verified continuing education; of those who had not taken such tests, the endorsement was 56%.

Physicians who had themselves taken self-assessment examinations consisted mainly of two groups—those who preferred and most frequently used self-instructional approaches such as audio tapes and readings, and those who found the primary obstacles to their continuing education to be a lack of opportunity in their area and an inability to leave their practices over periods of time. The study indirectly associates the latter two categories as mainly physicians located in smaller towns and at more distant points from major medical centers. Paradoxically, a low proportion of those who had judged their continuing educational exposure to be “inadequate” have taken advantage of self-assessment examinations, although it is unknown whether they were acquainted or not with the format and availability of such examinations.

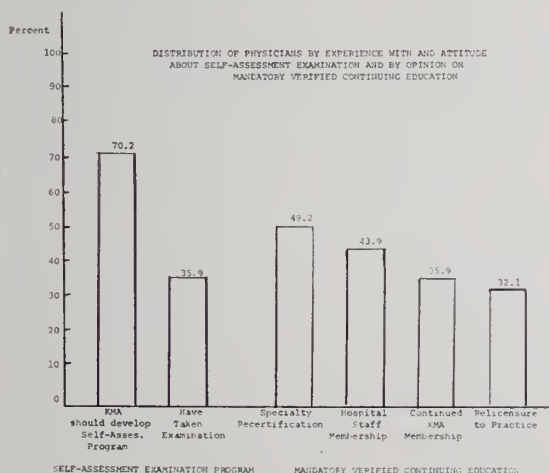


Figure 1

Mandatory continuing education at one of the four levels suggested on the questionnaire receives its strongest support from the youngest and oldest physicians, rather strongly by those in general or family practice, and considerably by internists and psychiatrists. The idea was notably supported by those who are

more rurally located and those who have taken self-assessment tests. The trend of interest seems definite but any firm conclusions on these important contemporary issues would require more detailed study in depth than this survey made possible.

The continuing education of physicians today is of rising concern to their professional organizations and the public. Is continuing education mostly of interest and benefit to the physician? What are the benefits to the physician's patients versus improved efficiency and satisfactions to him in his practice? Is satisfactory engagement in continuing education of concern to the public from the standpoint of assuring, or reassuring, the public of the quality of physician performance? Is the concern of the public one of curiosity, concerned interest or that of imposing a minimal floor of participation and performance? While these questions are beyond the scope of this study and report, they are involved indirectly in the response of physicians to the question regarding their preference of methods for financing their continuing education (Fig. 2).

Within the limitations of the questionnaire a third of physicians feel that financing should be cared for by the physicians alone, more than 50% would like to see it handled by only physicians and their hospitals. While 39% would concede some place in this activity for government financial support they would prefer it in conjunction with participatory support from physicians and their hospitals. Only 8% would rely only on the government and/or hospitals to support this enterprise. There are limitations to the reliance placed on these responses, although the trend of preference is clear. Limitations include the fact that the questionnaire did not indicate such preferences in relationship to some concept of actual cost either to the individual physician or of the total program of continuing education. Thus the response seems to indicate the physician's preference to manage and finance this area of his activities. But, as with many other preferences in life, there might well have been a shift in position if the physician had been handed a true bill of cost at the same time.

We feel sure it is not widely known what the true cost of continuing education is for the physician, just as it is generally not known to regular curricular students in the undergradu-



ate and postgraduate classes of the medical centers. The cost of the continuing education effort at the University of Kentucky and its extensions throughout the State, which are still relatively limited, are only met to the extent of 40-45% by physician registration fees and the contributions of negligible sums through their professional societies. Would physicians express the preferences shown in Figure 2 if by some means or other the bill for the additional 55-60% of current cost were passed on to them?

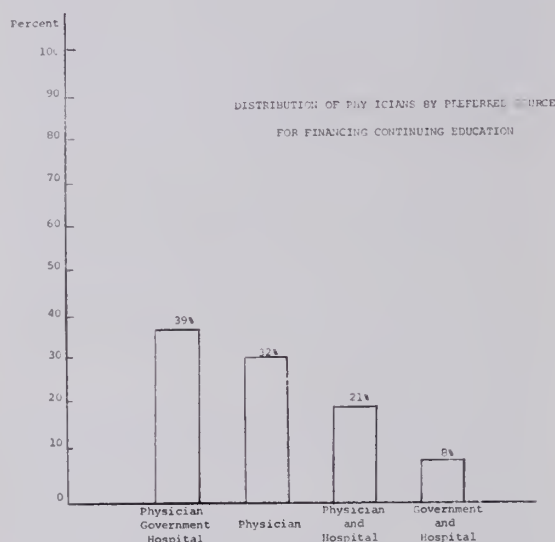


Figure 2

### Discussion

Like everything else in the education for and practice of medicine today, continuing medical education is undergoing drastic change. It can hardly be expected to be in the future what it has been in the past.

Multiple influences are coming to bear upon the system of "continuous" education for practicing physicians. We have entered an era of public accountability unlike any that we have experienced before. Malpractice trends indicate that every physician will be held to the standard of practice in a wide region (perhaps nationally) rather than his local area. This development is based on the judicial theory that we are now in a time of communications and transportation, such that there is no excuse for inadequate and outmoded practice within a few hundred miles of modernized care. Public accountability is also being sought by third party payees and the government in regard to the "quality" of medical care. Such interests

have led to the development of a variety of mechanisms for performance audits and now the law requiring PSRO development. In this State, as elsewhere, the medical profession is faced with taking the responsibility for developing not only an adequate PSRO system but a concomitant and systematic program for continuing education which will assure constant professional effort to maintain and improve physician performance in the care of patients. Even in the present conservative national administrative environment, the message seems perfectly clear. The medical profession must attend to these matters in an adequate way, and take the leadership in assuring adequate continuous education of physicians, or someone less knowledgeable professionally will do the job<sup>1</sup>.

It is timely, against these developments, to consider some principal findings in this study. A substantial proportion of Kentucky physicians have not engaged visibly and recently in continuing education. In large measure, they are moreover the same individuals who have not taken advantage of self-assessment evaluation. They may, however, be adequately involved in day to day consultative work with their peers, medical reading, audio tapes or other means of self-instruction. Continuing education by any means that works is adequate. It makes no difference how one keeps up as long as he keeps up. Such self-instructional approaches, however, will almost certainly at some future point be subjected to verification either by challenge examinations, or the continuous participation in and recording of assessment examinations such as the "Core Content Review" of the Ohio and Connecticut Academies of Family Practice. It is now possible in many instances to arrange either *local area* continuing education conferences at suitable intervals, or closed circuit television communications, or even remote telephone conferences for small groups at distant and isolated points. The excuse that one cannot "leave my practice" is liable to have very low currency in the near future. This is particularly true in the more urban areas where a substantial number apparently are not participating in the continuing education opportunities immediately available to them.

The substantial endorsement by Kentucky physicians of continuing education as an enter-

prise, of responsibility for its funding and of the need for KMA to take leadership in developing self-assessment examination programs, indicates to this writer, at least, that many physicians are both concerned and interested in a more viable continuing education than we have known in the past. It is the responsibility of educators, and leadership practitioners alike, to respond to this evidence of interest and concern in the subject by planning newer and better approaches to readily available continuous education for physicians, while together finding the ways in which the effort can be financially supported.

### Conclusions

In general we draw the following partial, and in some areas tentative, conclusions from the preliminary analyses of this data based on a representative sample of KMA membership.

1. The study displays some of the demographic characteristics of Kentucky physicians and relates those characteristics to their continuing educational needs and practices in terms of such items as urban/rural location; years of practice; specialty status differentials, etc.

2. The interviewed sample (262 physicians) shares very similar demographic characteristics with non-respondents to the study, and to a larger number of respondents by mail who were not interviewed.

3. KMA members show considerable interest and participation in a variety of forms of continuing education. Of these, they have given high rank to self-instruction by reading, audiotapes, informal consultations, etc., and a sub-

stantial support to more formalized course work.

4. There exists a strong preference for and use of medical center based programs despite a paradoxical recognition that this temporary removal from practice is impeded by a number of obstacles.

5. Seventy-eight percent (78%) of physicians were not "able to participate in as many continuing education activities" as desired despite the considerable effort and interest displayed.

6. Learning interest is strong in areas related to staying clinically competent (e.g. new ideas, improved special skills, refreshing old competencies); much less, but not absent, in regard to organizational concerns related to the manner in which medical care is to be delivered.

7. There is a considerable interest in self-assessment examinations. One-third have taken them. Almost three-fourths would like to see KMA involved in developing "an anonymous self-assessment program".

8. Kentucky physicians would generally prefer to either support fully, or at least in substantial partnership with hospitals or government (the public), the financial costs of continuing education.

### Reference

1. F. Lemon — Continuing Education — In the Midst of Rapid Change, *Journal of KMA*, Feb. 1973, p. 66-68.

### Acknowledgement

The author specifically recognizes and appreciates the considerable assistance of Dr. Judson Moss and Ms. Anne Cook of the OVRMP staff in organizing data collection and preparing analyses for this report.

# IN ASTHMA IN EMPHYSEMA



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New Employee Groups Enrolled.....	1,191	1,151

### Claims Experience

<u>Type of Contract</u>	<u>Number of claims paid</u>		<u>Amount paid for Member Services</u>	
	<u>1972</u>	<u>1971</u>	<u>1972</u>	<u>1971</u>
Indemnity.....	259,114	242,649	\$11,447,309	\$10,712,962
Usual, Customary and Reasonable.....	*162,538	101,651	7,348,461	5,325,182
Extended Benefits, BCBS-65, Major Medical, and F.E.P. Supplemental.	<u>102,118</u>	<u>77,424</u>	<u>4,915,391</u>	<u>3,437,187</u>
<b>Grand Totals.....</b>	<b>523,770</b>	<b>421,724</b>	<b>\$23,711,161</b>	<b>\$19,475,331</b>

\*225, fourteen-one hundredths of 1% of claims submitted, required Peer Review.

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*From the files of the*  
**COMMITTEE FOR THE**  
**STUDY OF MATERNAL MORTALITY**

---

**T**HIS 24-year-old unmarried white gravida 2, para 1, had delivered a 6 lb 11 oz girl vaginally December 11, 1967. Other past medical history is noncontributory.

She was seen initially with this pregnancy December 28, 1970. She stated her LMP was July 20, 1970. There was no history of nausea, vomiting, headache, or edema. Examination revealed BP 150/80. The fundus was at the level of the umbilicus and the FHT were 140. Prenatal vitamins and ferrous sulfate were prescribed. Laboratory work was not done at this visit since the patient did not wish to register, but said she would return in one month.

She was next seen in the emergency room February 3, 1971, complaining of pain in the upper chest in addition to intermittent pain in the lower abdomen radiating into the back. She had fallen over a mop the previous night, but sustained no apparent injury; however, she was admitted to the labor room for observation.

Examination on admission to the hospital at noon revealed the maternal heart rate irregular and rapid 108. The first heart sound was greater than the second. There was a "grade 2/6 systolic ejection murmur and a grade 3/6 diastolic murmur heard best at the aortic area. BP was 90/40, the chest was clear. The uterus was 3 fingerbreadths above the umbilicus, and no FHT were heard. The diagnosis at the time of admission was bronchitis and possible premature labor.

She was placed on bed rest; lab work was ordered plus an x-ray to determine possible fetal death. The nurses were instructed to listen for the fetal heart four times a day.

By late afternoon on the day of admission she was observed to have cyanosis of the lips. Her extremities were noted to be cool. She became somewhat restless. At 6:25 and 7:20 she had large, greenish black stools.

Around 9:30 p.m. her respirations became quite labored. Her BP was 76/40, pulse 110. Her lips were cyanotic and her extremities were cold and dusky. Her respirations were labored. Another staff physician was consulted and his findings were essentially the same.

At 11:00 p.m. a call was placed to an Ob/Gyn consultant in another center. It was his opinion that the patient had had an amniotic fluid embolism. He felt that prognosis was very grave. He recommended

digitalization, oxygen, Keflin and heparinization. Her admission Hb was 13.2 gm; this was repeated at 7:00 p.m. and was 13.3 with a hematocrit of 42%. Her VDRL was nonreactive, her blood type A negative.

An IV of Ringers lactate was started, 0.8 mg. Iv Cedalanid was given. At about 11:20 p.m. she had a large amount of emesis. Compazine 10 mg. was given. She became increasingly restless and complained of great difficulty breathing. At 11:28 p.m. her pulse became unobtainable. At 11:30 p.m. she had opisthotonos, became very cyanotic and had cardiac arrest. Respiratory assistance and external cardiac massage was started. Her pupils became dilated and fixed and she was pronounced dead at 11:45 p.m., February 3, 1971 about 11 hours after admission.

There was no autopsy. The cause of death was listed as:

1. Massive pulmonary embolization
2. Amniotic fluid embolization
3. Intrauterine pregnancy undelivered

#### **Comment**

This case was classified as a direct obstetrical death with possible preventable factors by the Committee on Maternal Mortality. Again, it is emphasized that since no autopsy was performed we cannot have a complete picture. However, many possibilities come to one's mind and it is interesting to speculate upon them. It is quite possible that she had rheumatic heart disease with valvular involvement. The irregular, rapid rate could suggest a complication such as subacute bacterial endocarditis or pericarditis.

However, a type of pneumonia is a real possibility since she had labored respirations and was cyanotic with a rapid pulse rate. This is a picture of a pneumonia or a septic pulmonary embolus.

Her care was criticized by the Committee in that more vigorous attempts at an early diagnosis did not seem to be taken. It is felt that the pregnancy perhaps exaggerated the problem of her heart disease and that is why it is listed as a direct obstetrical death. She was at period of pregnancy in which cardiac embarrassment as well as pulmonary problems can be at its height.





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### Brief Summary

**Indications**—Placidyl (ethchlorvynol) is indicated as short-term hypnotic therapy in the management of insomnia.

**Contraindications**—Drug hypersensitivity and porphyria.

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**Precautions**—Toxic amblyopia has been reported with long-term continuous use of ethchlorvynol. Permanent visual defects have been observed, although amblyopia has improved after discontinuation of the drug. Drug dosage should be limited for elderly and debilitated patients to the smallest effective amount. If pain is present, this drug should only be given if insomnia persists after pain is controlled with analgesics. Caution is advised in prescribing the drug for patients who are being treated with either MAO inhibitors or antidepressants. Transient delirium has been reported with the combination of Placidyl and amitriptyline. Drug dosage should be reduced if prescribed for patients receiving MAO inhibitors or antidepressants. Caution should be exercised in patients with impaired hepatic or renal function. Patients who respond unpredictably to barbiturates or alcohol, or who exhibit excitement and release of inhibition in association with such agents, may also react in this way to Placidyl. Rarely, patients may exhibit symptoms suggestive of an unusual susceptibility to the drug; such as prolonged hypnosis, profound muscular weakness, excitement, hysteria, or syncope without marked hypotension. Transient jitteriness or ataxia may occur.

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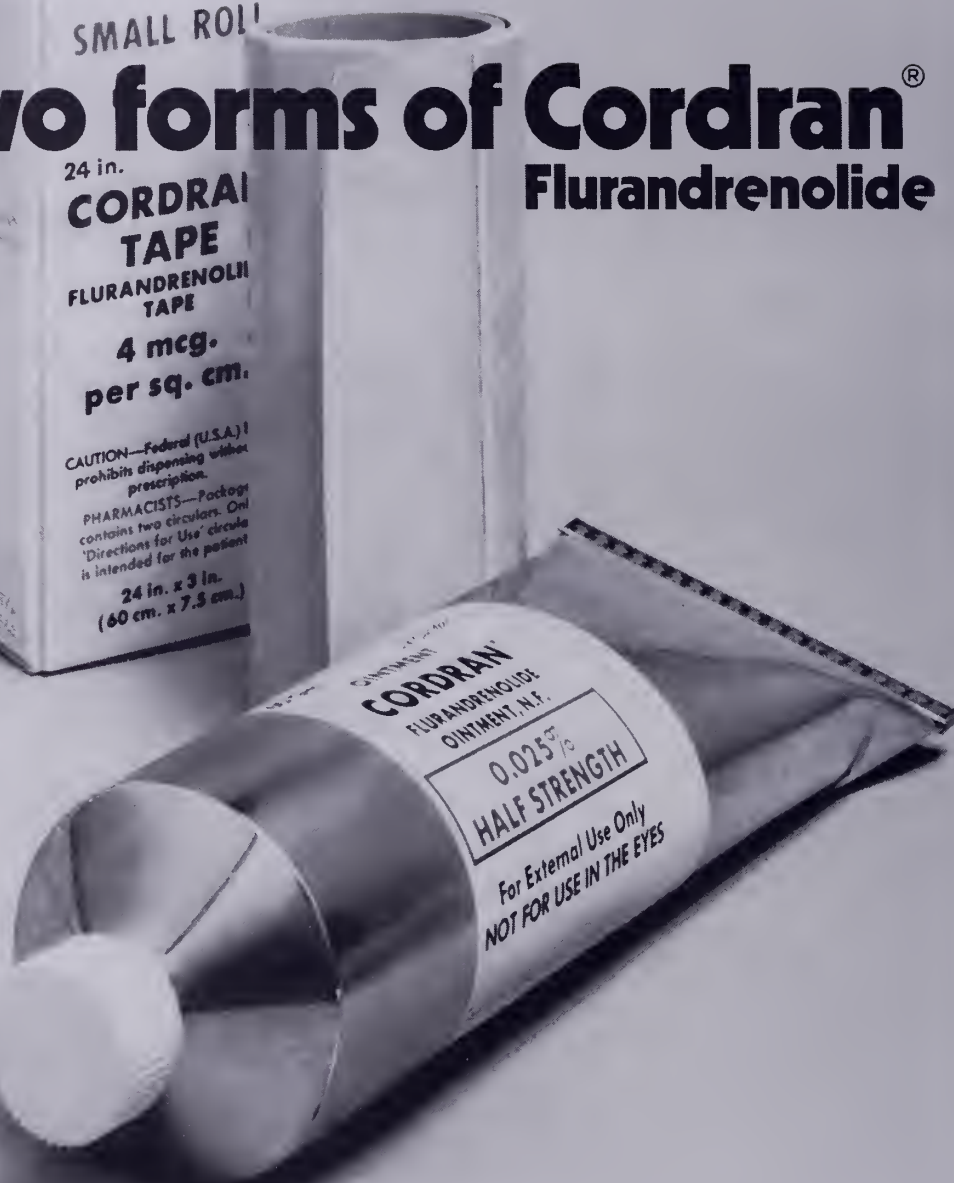
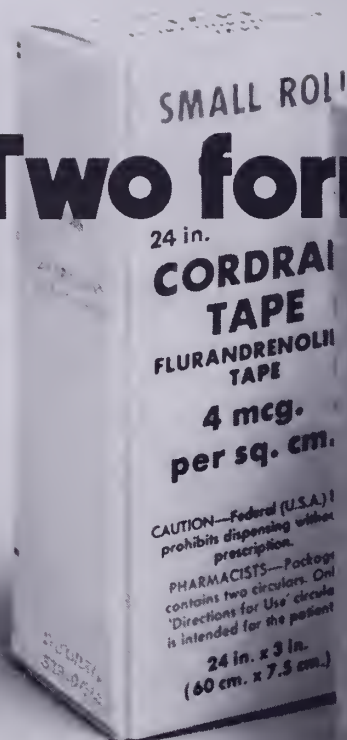


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# The JOURNAL of the Kentucky Medical Association

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## Over-Utilization of Diagnostic Radiology by the Department of Medicine of the University of Kentucky Medical Center During August 1972†

H. D. ROSENBAUM, M.D.\*, JACK HILDNER, R.T.\* and WESLEY HISER, M.D.\*\*

Lexington, Kentucky

*Of the diagnostic radiologic examinations performed for in-patients of the Medical Service, 11.8% were adjudged to be unjustified for medical reasons. The implications of over-utilization of radiologic studies are discussed.*

THIS brief study of usage of diagnostic radiological examinations was prompted by an impression that significant over-utilization existed. It was hoped information would be forthcoming to indicate its magnitude. Studies in other institutions indicate<sup>1, 2</sup> that excessive use of radiological examinations is general and has reached disturbing levels. The magnitude of this problem is indicated by contrasting the population increase in the United States from 1958 to 1963 of 14.3% with the increase of x-ray film consumption for the same period of 44.0%<sup>1</sup>. There is no reason to believe this rate of increase has abated.

A recent report<sup>3</sup> of routine x-ray examinations of the skull of 570 children with head trauma has shown that \$7,125 is spent on such studies before any information is obtained that

alters treatment of the patient. Bell and Loop<sup>4</sup>, in a similar study including both children and adults, indicate \$7,650 is spent on such skull films for every fracture discovered. They suggest that \$25,500 to \$37,800 is expended for each bit of information that in any way alters the course of treatment. According to their data, application of discriminative judgment in ordering skull films for trauma would reduce the nation's health bill approximately \$15 million annually. Harwood-Nash et al<sup>5</sup>, in a report of 1,187 skull fractures in 4,465 children, felt that discovery of the fracture was of negligible significance and did not warrant the roentgen examination.

### Method and Results

The examinations performed each day on in-patients of the Medical Service and reviewed at the daily Medical X-Ray Conference were discussed and a joint decision reached as to whether each examination was indicated or could have been safely and properly omitted.

A total of 619 separate radiological examinations were reviewed in this manner during August, 1972, at a total cost of \$14,013 for an average cost per examination of \$22.64 (Table 1). Seventy-two of these 619 radiological examinations were adjudged not to have been indicated. These 72 examinations at a cost of \$1,294 represent 11.8% of all radiological examinations performed. Chest films constituted 47% of all examinations performed with

†This study was supported in part by PHS Grant #HS 00567.

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7.3% of the chest studies being portable. Fifty-seven per cent of all unjustified examinations were chest x-rays.

There were different reasons why an examination was adjudged to be unjustified (Table II). The administrative errors noted include repetition of examinations already obtained by another service, ordering an examination on the wrong patient, failure to note and to examine available outside films, etc. On 27 occasions repeat examinations were obtained too soon after a previous study to be of value in evaluating the course of the patient's disease. An examination was adjudged to be appropriately placed in this category only after carefully considering the patient's disease as well as the clinical and radiological findings. Only one occasion was the examination performed solely for the purpose of satisfying the House Officer's curiosity. On two occasions it was impossible to discover a reason from anyone to explain why an examination was performed.

Twenty-seven examinations were adjudged to be unjustified for medical reasons. Examples of this situation, obviously a matter of judgment, include examinations without significant diagnostic or therapeutic possibilities such as various studies to investigate numerous symptoms of a terminal patient with multiple myeloma, skull examinations performed because a patient had syncopal episodes due to pacemaker failure, a metastatic series in a patient with gout, or radiological examinations of the hands, pelvis, lumbar spine and chest on an 83-year-old patient to rule out early rheumatoid arthritis.

Six chest examinations were obtained as a routine measure following thoracentesis. It was felt that clinical judgment showed no need for the films in these instances.

Errors by the Department of Diagnostic Radiology accounted for five unnecessary examinations. These errors include improper ad-

vice to Medical House Officers by a Radiology House Officer or, by inference, an examination solely for the interest of the radiology resident.

### Comment

Lack of communication between the patient, the Medical House Officers and Staff, and members of the Department of Diagnostic Radiology as well as, in some instances, lack of knowledge of the potential of radiological examinations account for this considerable waste of money and needless radiation exposure during August, 1972. When extrapolated for a full year the study suggests there will be expended \$168,156 in radiologic studies for inpatients of the Medical Service. Of this amount, approximately \$15,528 would be unjustified. Since Diagnostic Radiology accounts for 5.86% of the total hospital charges, more care in ordering x-ray studies could reduce total patient costs in this institution by almost one per cent.

The figures cited above include no examinations for legal documentation as often occurs with many emergency room patients. It also is noteworthy that the percentage of examinations adjudged not to be indicated decreased as the month progressed (Figure 1) and the House Staff came to realize that some sort of survey was under way. The salutary effect of even this minimal constraint is striking. Obviously, much more could be accomplished with a concerted effort to reduce excessive roentgen studies. It is also likely that the reduction could have been partially the result of increasing experience. It would be of value to repeat the study in May, 1973, to assess the consistency of these results as the House Officers near the end of one year of clinical experience.

It is obvious that appropriate clinical judgment can reduce significantly the number of x-ray examinations ordered without compromising good medical care. In fact, patient care most likely is improved since discrimination in

Table 1

Diagnostic Radiological Examinations of Medical Service In-patients

August 1, 1972 — August 31, 1972

		%		Cost	
Total Examinations	619	100.0%		\$14,013.00	.
Chest Examinations	264	47.0%		\$ 4,488.00	
Portable Chest Examinations		42	7.3%		\$840.00
Unjustified Examinations	72	11.8%		\$ 1,294.00	
Unjustified Chest Examinations		42	57.0%		\$744.00



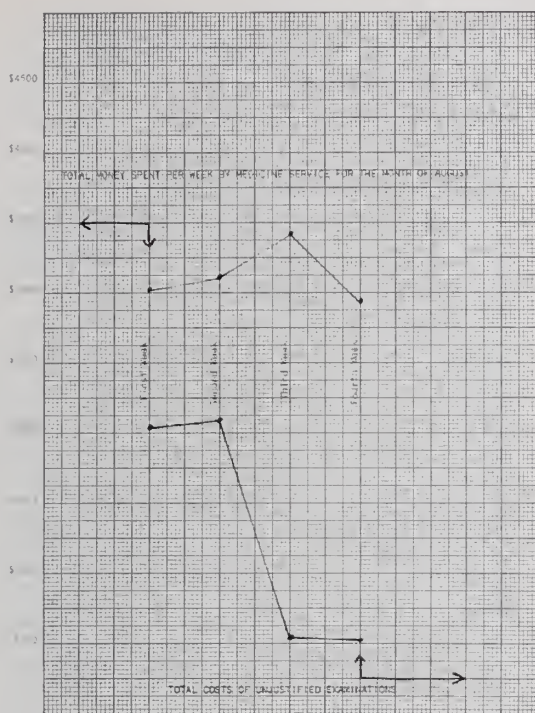


Figure 1

ordering roentgen examinations requires thoughtful consideration by the physician of the patient's problems. It certainly results in less expense. Although it is unusual for a Department of Radiology to discourage use of its services, such is done in this instance since doing so is thought to be in the interest of better medical care.

It is likely that pressures to reduce the number of x-ray examinations will increase in the future. Moves in this direction are abetted by the continuing fear of damage from excessive radiation. The not inconsiderable cost also is becoming of increasing moment. It is reasonable to expect the courts eventually to reverse their present stance that failure to obtain an x-ray examination is *prima facie* evidence of neglect. The courts might very well rule, if presented with a test case, that real or presumed damage from needless roentgen examinations is malpractice. Such an event immediately would change the frame of mind of physicians concerning x-ray examinations. In the long run, this may be required to make lasting headway toward solving this problem.

More data are needed to define with precision the value of x-ray examinations under varying clinical situations. The American College of Radiology has obtained funds to pursue this problem and the forthcoming data should

give the medical profession a quantitated body of information indicating proper courses of future action in these matters. The significance of the fact that the vast majority of all diagnoses can at least be confirmed by radiological studies must be more carefully assessed<sup>6</sup>. The patient's welfare is not beneficially affected by the mere radiological confirmation of a clinical diagnosis that is obvious to any physician through casual observation, questioning or examination.

Studies elsewhere<sup>2</sup> have shown it is possible to significantly reduce unnecessary x-ray examinations. This was accomplished at the University of Colorado by repeatedly reminding the medical, surgical and pediatric house staffs only to order examinations that are distinctly indicated. Using these tactics, the diagnostic radiologic work load was reduced 20-30% for a relatively short period of time, but once continuous reinforcement was ended, the examination rate returned to its previous level.

Daves<sup>2</sup> in reporting the study from Colorado enumerated causes of excessive radiologic examinations as follows:

1. *Double time*, or repeating examinations that have already been performed in the Out-patient Department. This occurs aplenty at the University of Kentucky.
2. *Busy time*. This, in essence, is occupational therapy for the patient since all it accomplishes is to keep the patient busy.
3. *Couch time*. This is psychological therapy for the physician. A negative x-ray study reassures the physician that a patient's nausea is, in fact and as might be expected, secondary to his uremia. It obviously is easier to order an x-ray examination than to think.

This category can be subdivided into *Legalphobia* — the obvious cause of many emergency room examinations (there are no penalties at present for frivolous or repetitious studies) and *Serviceosis*, which is defined as a morbid condition of routinely requesting certain radiologic examinations on any patients seen by a certain service. For instance, he cites the metastatic survey that often is routinely ordered on all patients with cervical carcinoma. Our routine chest

Table 2

Unjustified Examinations	Number
Medically Unjustified	27
Insufficient Time Between Repeat Examinations	27
Post-Thoracentesis Chest Examinations	6
Errors of Diagnostic Radiology	5
Administrative Errors	4
No Explanation Obtainable	2
Interest of House Officers	1
<b>TOTAL</b>	<b>72</b>

film following every thoracentesis is an excellent example.

4. *Cath time.* These are the numerous examinations, performed by the "blood sports" of Radiology, which previously were "pushed" by the Radiology service. Eventually the clinicians were oversold and now order these examinations somewhat profligately.
5. *Museum cases of teaching value.* These are films for documentation of all so-called "rare" cases.
6. *Change-over time,* described as the "intern mambo", in which many of the factors cited above, and others such as lack of experience and knowledge, affect the intern early in his tenure and during his orientation to any new service.
7. *"Preferred A" time,* or "the insurance policy will pay for it anyway".
8. *The "save time".* In this maneuver the physician orders all possible x-ray examinations upon admission of the patient to the hospital in the hope of saving time. He also may be able to avoid a time-consuming history and physical examination.
9. *"Any time" radiology* refers to x-ray examinations incorporated into periodic health examinations. According to Daves<sup>2</sup> there is confusion concerning periodic health examinations and their relationship, if any, to preventive medicine. He suggests that discovering a carcinoma of the colon two years before it

otherwise might have become evident does not necessarily mean the patient actually lives two years longer but rather only that he "seems" to live two years longer.

10. *Folkways of patients.* There is no doubt patients "want" (at times even demand) x-ray studies and ascribe undue significance to radiologic studies. This must be firmly resisted.

In many instances, the art of examination of the patient has long since given way in part to easily applied roentgen methods. No longer does the physician diagnose a pneumothorax by examination and only document its presence by x-ray if doubt exists or prior to placing a chest tube. He may be more inclined to examine by x-ray and listen to the chest if such appears to be indicated from the results of the roentgen study. This approach is unfortunate. The ordering of more or less routine x-ray studies (worse yet, "shotgun" examinations) results from muddled thinking. There should be a good, defensible reason for any examination, roentgen or otherwise. Application of discriminative clinical judgment (which requires an appropriate quantum of medical knowledge) leads to polish and accuracy in patient evaluation. Rigorous adherence to these precepts not only will significantly reduce unnecessary examinations which are bad in their own right but will elevate the quality of patient care and consequently magnify the finest qualities of a physician.

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# Parapsychology—Implications for Medicine†

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Before considering the specific topic at hand, it may be well to provide you with a brief orientation as to where parapsychology is today and the extent to which the current scene reflects major changes and developments that have come about only within the past decade or so. The field has moved considerably and no longer is there exclusive or even major reliance on card calling experiments and the statistical teasing out of significant values. Experimenters are still very much involved with the problem of quantification and the use of appropriate statistical measures, but the arena in which the investigations are being pursued reflect both a more imaginative experimental thrust and a more effective use of modern experimental technology. One finds the same hardware in use in parapsychological laboratories that are in use in the investigation of less controversial areas. Electroencephalography, the monitoring of autonomic effects, the use of bio-feedback techniques for the control of brain rhythms, and the use of highly sophisticated systems for the detection of minute physical effects are all considered standard equipment for the research parapsychologist of today. This was borne out very clearly at the most recent meeting of the Parapsychological Association held recently in Edinburgh. There has been a literal explosion in the range and amount of serious research now going on the world over by dedicated and well-credentialed investigators in academic settings. Of my four companions on the return air trip home, one was a psycholinguist studying the problems of paranormal information transfer, one was a biophysicist interested in the problem of psychokinesis, one was a fourth-year medical student engaged in animal Psi research and one was a clinical psychologist interested in

the manifestations of telepathy in the clinical setting.

In addition to the appearance of courses in parapsychology at the college and graduate level, there is an increasing amount of academically sponsored research going on, some of which I will cite later on. More important, however, is the fact that the professional association of research workers in the field of parapsychology, the Parapsychological Association, was recognized as an affiliated society of the AAAS at its meeting of December, 1969. In this country there are two serious journals publishing research in the field, the *Journal of the American Society for Psychical Research* and the *Journal of Parapsychology*. New groups and periodicals are springing up at a rapid rate. Although most simply reflect the growing tide of interest in the occult, a few may turn out to endure as serious efforts. Within the past year an Academy of Parapsychology and Medicine has been formed on the West Coast, one of the main aims of which is to study claims that come under the general heading of unorthodox healing. Other terms often applied to this are psychic healing, spiritual healing, mental healing, etc.

Most of us are familiar with the beginning effort of Rhine at Duke University to place parapsychology on a scientific footing. If we go back a bit further we find first of all that there exists a very rich tradition of serious observation and investigation of what was formerly called psychic phenomena and secondly, we note the important role played by medical men in championing a controversial cause at a point in history where science was rapidly entrenching itself in a seemingly unassailable logico-positivist position. Psychiatrists, then as now, appeared to spearhead the effort. On the continent these included Schrank-Notzing and Lombroso, who investigated the well-known mediums of their day and Janet, who on repeated occasions successfully demonstrated hypnosis at a distance. Charles Richet although not a physician but a Nobel Laureate in physiology, collabo-

† Presentation made during the KMA Annual Meeting, September 21, 1972, Louisville.

\* Director, Community Mental Health Center, Maimonides Medical Center, Brooklyn, New York, Professor of Psychiatry, State University of New York, Downstate Medical Center, Brooklyn, New York.



rated with English investigators in the study of spiritistic phenomena. In this country one of the most active and prominent members of the Boston Society for Psychical Research, the forerunner of the present American Society for Psychical Research, was William James. He wrote extensively on his own experiences with mediums and on his reflections on the importance and significance of psychic phenomena<sup>1</sup>.

More recently we have the names of both Freud and Jung linked to parapsychology, Freud in a cautious but interest way and Jung in a spirit of open acceptance. They ushered in an era of clinical interest which has persisted to the present day.

Parapsychologists address themselves to puzzling events occurring spontaneously as well as to events reproducible in the laboratory. Among the spontaneous and anecdotal phenomena the question of unorthodox healing has evoked the most interest from a medical standpoint. Claims of cures of this nature, the results of prayer, the laying on of hands, the use of ritual, etc., have been known to us from antiquity. Miracle cures are reported from time to time and the well-known shrines continue to attract those seeking help. Medical men have played a prominent role in commissions which have been set up to investigate, but one is left with an unconvincing mix of "cures," improvements and failures with the cures more related to functional than organic illnesses. The point, however, is that although the anecdotal accounts and the more systematic investigative accounts fall short of conviction, they have been suggestive enough to stimulate serious research to ascertain whether or not there is any objective means of testing the claims of healers.

Perhaps the best example of experimental work flowing from the interest in unorthodox healing are the studies pursued by Bernard Grad, a physician and research biologist in the Department of Psychiatry at McGill University. He and his associates set out to investigate under controlled conditions, the actual power of a self-styled "healer" who by passing his hands over a sick individual claimed to exert a healing effect. The healer in this case felt confident that his ability would work on animals, thus affording an opportunity to test his power under circumstances where sugges-

tion would be eliminated.

Doctor Grad, working with mice, studied wound healing under controlled conditions.<sup>2</sup> The wounds were made on the backs of mice by removing an area of skin and then measuring these areas over an 18 day healing period. In the treatment group, the healer held the cage containing the mice between his hands for 20 minutes twice daily. The controlled group simply remained in their cages without handling. Highly significant differences were found between the mean wound areas of the treated and control animals by the 11th day following wounding. The mean wound areas of the treated animals were smaller than the control means.

A second experiment was done under more carefully controlled conditions. The mice treated by the healer were compared to mice treated by a number of different individuals who claimed no special healing abilities, and with control animals where no special treatment was given. In addition, the treatment was carried out in a way that ruled out thermal and other effects from the healer's hands as well as the possible factor of "gentling." By the 15th day, the contrast between the experimental group and the other two groups was significant at the 1% level, while the contrast between the two control groups was insignificant.

Doctor Grad and his associates also studied the influence of a healer's power on plant growth<sup>3,4</sup>. He reported on an experiment in which the healer could apparently produce changes in 1% sodium chloride solution by holding it between his hands for 15 minutes. When this solution was used to water barley seeds in soil, the studies produced a more significant yield of plants than in the control studies receiving the same amount of untreated 1% sodium chloride. In a controlled experiment where the treatment of the saline was omitted, there were no significant differences between the two groups.

Another project undertaken by Doctor Grad and his associates, was the study of a healer's influence on the rate of development of goiters artificially induced in mice<sup>5</sup>. The goiters were produced by feeding the animals a diet deficient in iodine and including goitrogenic drugs. The rate of increase in the size of the thyroid gland in both control and treated

mice was determined by weighing the thyroids of mice sacrificed at suitable intervals. The results showed that the rate of increase of the thyroid gland in the mice fed the goitrogenic diet could be significantly inhibited by the two healers used in the project. The experiment was controlled for possible influence of heat.

Doctor Grad extended his plant experiments to include not only healers but a comparison of the results obtained when depressed persons handled the saline solution<sup>5</sup>. He assumed that there was a relationship between the mood of the persons involved in the experiment and the subsequent growth of the plants watered by the saline they handled. In a comparative study involving a healer and a patient with a psychotic depression, the seedlings watered by saline held by the person who had a psychotic depression showed the slowest rate of growth. The author concluded that mood at the time the saline was held was a critical factor.

Another experiment along physiological lines was performed by Graham and Anita Watkins on the paranormal influence of resuscitation on anesthetized mice<sup>6</sup>. A number of subjects who professed to be good "psychics" were tested for their ability to cause mice to arouse more quickly from ether anesthesia than normally would be expected. Matched pairs of mice were simultaneously rendered unconscious in identical etherizers. They were then brought to the subject who was told to awaken his or her mouse while the other member of the pair was used as a control. The results were highly significant with the experimental animal requiring 87% as much time to awaken as the control.

There are a number of well documented reports in the literature of unusual physiological effects which may or may not be related to the kinds of results described above. There appears to be an intermediate grey area where unusual effects obtained under hypnosis or through the use of feedback techniques may articulate with some of the paranormal effects experimentally induced. I have reference to the induction of blisters<sup>7</sup>, the control of bleeding<sup>7</sup>, and the removal of warts<sup>8</sup> all of which have been reported in connection with hypnosis. Elmer Green, a research physiologist of the Menninger Foundation, working with a Yoga named Swami Rama and employing

the use of feedback, demonstrated rather remarkable control with autonomic functions<sup>9</sup>. The Yoga made his pulse disappear on command with the electrocardiographic tracings revealing a state of atrial flutter. The Yoga also accomplished the rather unusual task of causing delta waves to appear on the electroencephalographic record while remaining conscious of the reality about him.

Early investigators interested in the possibilities of hypnosis have reported on the successful induction of hypnosis at a distance. This included the well known French scientist, Pierre Janet<sup>10</sup> and in more recent times, the late Professor Vasiliev, Chairman of the Department of Physiology of the Leningrad University<sup>11</sup>.

Stevenson<sup>12</sup> calls attention to the possible relevance of extrasensory factors in accounting for the appearance of sudden unexplained somatic symptoms. The following case from a collection of Doctor Louisa Rhine is not atypical of anecdotal accounts that suggest this possibility.

"In January, 1956, at eleven o'clock in the morning, I was standing supervising the girls in my employment. A terrible pain shot through my right hip. It was almost unbearable, and I limped to my desk to sit down. I knew of no reason for the pain. Standing or sitting brought no relief. That evening, I consulted the home physician, and he advised me if I was no better, to come to his office in the morning and have some x-rays. As the pain was constant, I tried to divert my mind by going to the ballroom where we have a movie at nine o'clock in the evenings.

"Unrest assailed me, and the urge to go away from the ballroom was so great that I limped back to my office. Just as I entered the door, I was being called long distance. My mother had fallen at eleven o'clock that morning and broken her hip. By morning the pain was gone, and I was perfectly well."<sup>13</sup>

Earlier mention was made of Professor Vasiliev's work on hypnosis at a distance. There are current studies going on in the Soviet Union which may or may not turn out to have relevance to the question of whether or not there is a parapsychological dimension to the phenomenon of healing. There are two



lines of investigation that I had some first-hand knowledge of in connection with a recent visit. One is their renewed interest in acupuncture and the other is their investigation of living organisms by a technique referred to as Kirlian photography. The object to be photographed is placed in a high-intensity, high-frequency electrical field. Flare-like effects occur, perhaps the result of ionization around the borders. The Russian investigators claim that these effects vary in intensity and color depending on the psychological and physiological state of the organism at the time it is photographed. Some go so far as to identify the flare as a new form of biological energy and believe that it is this energy which is responsible for what we call psychic phenomena and what Soviet workers refer to as bioenergetic effects.

Acupuncture studies reveal differences in electrical potential between paired points when one point lies over a diseased part. These differences are also reflected in different configurations with regard to color and pattern when the skin in the vicinity of the particular points is studied by means of Kirlian photography.

If nothing else, the investigations and studies I have alluded to have opened up to scrutiny

some as yet poorly understood aspects of the healing processes. Whether these turn out to be parapsychological in nature or more akin to something equally mysterious, namely suggestion, is perhaps not as important as the fact that they have once again engaged our attention and have elicited a serious experimental response.

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# Tuberous Sclerosis: A Case Presentation

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Louisville, Kentucky

*Described is a case of tuberous sclerosis in a 53-year-old female with the additional features of progressive renal failure, gonadotrophin production from a presumed trophoblastic tumor and probable hypopituitarism.*

**B**OURNEVILLE first described in 1880 the triad of mental deficiency, seizures and adenoma sebaceum. This entity, inherited in an autosomal dominant manner, comprises one of the neurocutaneous syndromes: other phacomatoses include Neurofibromatosis, Sturge-Weber, Von Hippel-Lindau and Ataxia Telangiectasia. The following case report demonstrated several unusual findings.

## Case Report

A 53-year-old Caucasian, unmarried female presented May 1, 1972, with a one year history of pedal edema. She had been noted to have a papular facial eruption since infancy, and shortly thereafter subungual growths had been noted. Mental retardation had been lifelong and at age 23 months, major motor seizures had begun; these were under anticonvulsant control. She had normal menses till onset of menopause, approximately one year prior to admission. The patient had required custodial care which had been provided by her parents. The other family members did not demonstrate any of these findings.

## Physical Exam

Temperature 96; Pulse 80; Resp. 20; B/P 100/80. Facial adenoma sebaceum, subungual fibromas and a lumbar "shagreen" patch were noted on inspection. Facial expression was vacuous and mental retardation was reflected in poor comprehension by the patient. Poor

hygiene was apparent; the thyroid was not enlarged. Trachea midline.

Lung exam: No dullness to percussion. Occasional moist inspiratory rales at bases. Cardiac Exam: normal jugular pulse, no evidence of cardiomegaly, no murmurs or gallop rhythm. Pitting edema was present in both lower extremities. Abdominal exam revealed a large tender mass below the umbilicus; and on pelvic exam this lesion was felt to be either uterine or ovarian.

Neuro exam: marked mental retardation. No localizing signs. Reflexes: Hypoactive. Fundus showed no papilledema. Cranial nerves intact. Reflexes - delayed return.

**LAB.:** Hb. 11.0, WBC 25,400, Polys. 84% Stabs 7%, Monos 3%, Eos. 1%. Urinalysis Ph 5.5, Glucose O, Alb. O, Sp. gravity 1.015. Microscopic exam: 1-2 WBC, many epith. cells, Na 131, K+ 3.9, Bun 86 (Nor. 7-20), CO<sub>2</sub> 20, Cl 95, Bilirubin 6.5, (Nor. 1-2) Alk. Phos. 150 (Nor. 9-35) SGOT 75, (Nor. - up to 28) Uric Acid 19.2, (Female Nor. 2-7) Glucose 100. VDRL - non-reactive.

ECG - non-specific ST segment changes. PBI 2.2 (Nor. 4-8), Urinary Gonadotrophin 4,200 iu/24 hours, 17 KS, 3.3 mg/24 hrs. 17 OH steroids 0.7 mg/24 hrs. (Volume 600 cc) (Nor. 17KS 5-15, 17-OH steroids-2-12, Gonadotrophin levels (Nor. - no titre).

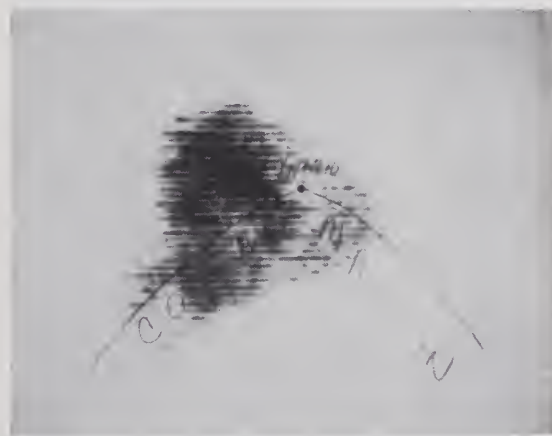


FIG. 1 Liver scan—Diffuse Infiltrate with replacement of normal tissue.

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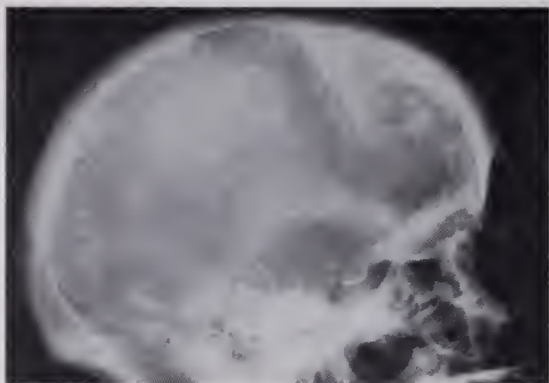


FIG. 2 Skull x-ray showing sclerotic densities.

Repeated blood cultures were negative. A liver scan (Fig. 1) shows a diffuse infiltrating lesion. An IVP was not attempted because of the BUN level of 110, which X-ray studies demonstrated some of the characteristic findings in the disease. Skull x-ray (Fig. 2) shows sclerotic densities and the hand x-ray (Fig. 3) demonstrates cortical erosions. The other radiographic finding of particular significance in this case was demonstrated by the abdominal film (Fig. 4) which shows a pelvic mass, without fetal bones, displacing the bowel. A chest film



FIG. 3 Hand x-ray showing cortical erosions.

(Fig. 5) shows an infiltrate over the left hemidiaphragm, but no reticular pattern.



FIG. 4 Abdominal film—Bowel displaced by a large pelvic mass.

In an attempt to lower the uric acid level, Allopurinol was given by tube, however, this was unsuccessful. The patient failed to improve despite antibiotic coverage, and the preterminal evens were marked by an elevated prothrombin time, 27.8 (control 11.7) decreased partial thromboplastin time (26) (Nor. 35-50) and positive fibrin split products. Platelets 97,000. Heparin therapy failed to ameliorate the course and the parents at one point asked heroic measures not be undertaken. The patient expired on May 15, 1972.

A post-mortem was denied.

#### Discussion

This case presented the classic appearance of tuberous sclerosis with the noted triad. The additional unusual features, however, prompted the presentation of this patient.

Progressive renal failure was a significant factor in the patient's course. The reported renal lesions in this disease are angioliipomata and can be diagnosed radiographically as en-

larged renal images with mottled translucent densities; often the differential diagnosis is that of polycystic kidney disease<sup>2</sup>. The angioliopomata are very vascular<sup>2</sup> and may cause pain when bleeding occurs within the tumor mass.

Whether the elevated uric was primary or related to renal insufficiency is indeterminate. The patient had not shown any self-mutilation, as in Lesch-Nyhan syndrome nor was there evidence of lymphoma. No enlarged renal masses were palpated in this case nor was radiographic differentiation possible.

No characteristic pulmonary lesions were demonstrated in this case. These appear radiographically as honeycombing<sup>3</sup>, and patchy infiltrates. Functional abnormalities of obstructive airway disease ventilation-perfusion abnormalities have been reported<sup>4</sup>.

Bony lesions occur in long bones and also in the calvarium and phalanges<sup>5</sup> as in this case. The basic soft tissue lesion is hamartomatous and occurs in the retina, brain, bone, liver, heart, lung and kidney<sup>2</sup>.

The elevated human chorionic gonadotrophin raises the possibility of a gonadotrophin producing neoplasm. Whether the liver scan was indicative of metastatic disease is uncertain since the mottled infiltration could have represented a vascular lesion. The relatively low TSH with the low PBI points to secondary hypothyroidism. A hypothalamic lesion or pituitary lesion could not be ascertained, nevertheless, intracerebral lesions are known in tuberous sclerosis<sup>6</sup>. The low steroid values could represent secondary Addison's disease, but, because of low urine volume the results were questioned. Values were repeated and they were low on retesting. The age of this patient is unusual, since survival beyond the second or third decade<sup>7</sup> is rare.

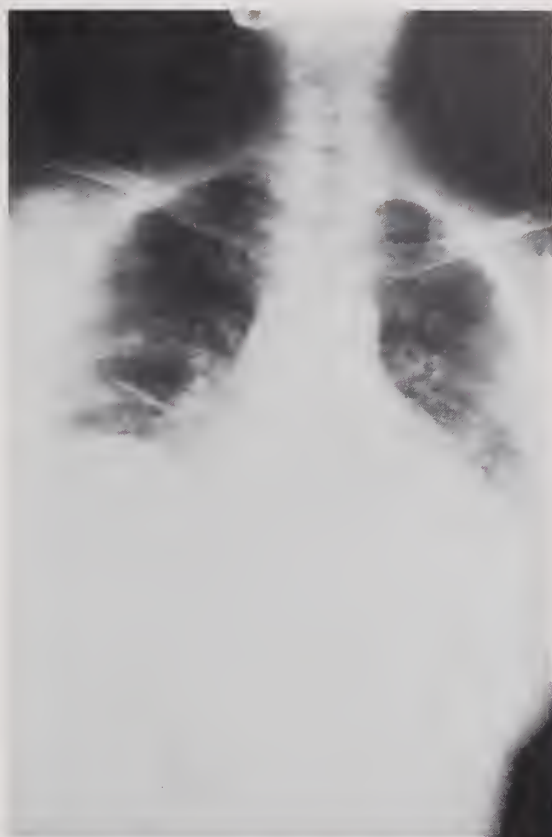


FIG. 5 Chest film showing basilar infiltrate over left hemidiaphragm.

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# Medical Progress

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## A Practical Approach To The Diagnosis and Treatment of Intestinal Malabsorption†

R. J. CIANFICHI, M.D., AND J. G. BANWELL, M.D.\*

**T**HE diagnosis of intestinal malabsorption in modern practice indicates that there is a failure in absorption of nutrients from the small intestine. It may occur because food is not digested properly into absorbable constituents (maldigestion), as in pancreatic insufficiency, or because foodstuffs are not absorbed from the intestinal tract (malabsorption) as in coeliac disease.

The clinical presentation results from three major factors:

1. Unabsorbed food substances entering the colon to cause the passage of the characteristic fatty stools (steatorrhea), as well as the generation of fermentation products (flatus and other products, such as lactic acid and hydroxy fatty acids) which alter the rate and character of colonic emptying.

2. The clinical manifestation of the nutritional, mineral and vitamin deficiencies resulting from malabsorption of these essential nutrients.

3. Systemic symptoms as a result of the underlying disease process, malabsorption (anorexia, vomiting, fever, malaise etc.)

Table I lists some of the common symptoms encountered in the malabsorption syndrome and the pathogenetic factors usually involved. The goal of this paper is to present:

- a. A brief review of the physiology of digestion and intestinal absorption.
- b. A useful guide of clinical procedures and laboratory tests to help the clinician de-

termine whether the primary abnormality is in digestion or absorption and to determine a specific etiology, if possible.

- c. An outline of practical therapy based on the determined pathologic process and nutrient deficiency.

### Review of Physiological Processes Controlling Intestinal Absorption

The digestion and absorption of foodstuffs is a complex and integrated process involving secretion of digestive juices, homogenization and mixing of food and the orderly propulsion out of the stomach through the small intestine. The early phase begins in the mouth with mastication and breakdown of starches (polysaccharides) by salivary amylase (ptyalin). Food traverses the esophagus and enters the stomach where gastric motility provides a churning mixing action. Hydrochloric acid (HCl) is secreted by gastric mucosal cells via the stimulus of the vagus nerve and the hormone, gastrin, which is secreted by the antral portion of the stomach in response to several stimuli, including distention. The gastric mucosa also produces an enzyme, "pepsin", which works in this acid milieu to cleave the peptide linkages of proteins to form polypeptides. Only a very small percentage of the water and electrolyte content of food is absorbed at the gastric surface.

Food, homogenized and mixed, next passes into the small intestine where amino acids and the acid pH stimulate the releasing of two hormones from the intestinal mucosa of the upper intestine.

1. "Secretin" causes the secretion of an alkaline fluid by the pancreas; thereby buffering the acid duodenal contents and raising

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the pH of the upper small bowel to neutrality

2. *Cholecystokinin—Pancreomyzin (CCK)* concurrently released cause the gallbladder to contract and empty bile into the duodenum and the pancreas to excrete enzymes: lipase, amylase, trypsin and chymotrypsin responsible in large measure for the intraluminal digestion of fat, carbohydrate and protein.

The average American diet contains approximately 60-100 gms of fat a day, the major portion of which is in the form of neutral fat or triglycerides. Insignificant hydrolysis of lipid occurs in the stomach. Bile salts and lecithin augment the previous mixing action of the stomach and facilitate the formation of a fine suspension of fat particles, on the surface of which pancreatic lipase has its hydrolytic effect. Pancreatic lipase preferentially split the ester bonds at the 1<sup>st</sup> and 3<sup>rd</sup> position causing breakdown of triglycerides into 2-monoglycerides and long chain fatty acids. These products are subsequently solubilized by forming "micelles", since dietary fat, fatty acids and monoglycerides are only sparingly soluble in water. Micelles are multimolecular aggregates of bile salts and monoglycerides, detergent-like polar compounds which have the ability to

bring into solution in the micellar structure water insoluble fatty acids. Fatty acids achieve water solubility, a necessary prerequisite to absorption from the lumen, by this process of micellar solubilization. When the myriads of micelles approach the intestinal epithelial cell membrane, fatty acids and monoglycerides passively diffuse into the mucosal cell and in the mucosal cells two further events occur:

a) reesterification of fatty acid and monoglyceride to triglyceride.

b) triglycerides become associated with cholesterol, cholesterol ester, phospholipid and lipoproteins to form chylomicrons which pass out into the lacteals from the base of the mucosal cell and thence into the general circulation.

Adequate bile salt concentrations are essential for fat solubilization and micelle formation. This is normally achieved by a small pool (3-5g) of bile salts which are secreted in the bile and constantly re-utilized through passive diffusion in the proximal intestine and active absorption in the ileum. Normally approximately 96% of this pool is re-utilized in any one cycle through the intestine, little escaping into the colon to be excreted. It is estimated

**Table 1**  
**CLINICAL MANIFESTATIONS**

<u>Clinical Features</u>	<u>Associated Nutrient</u>	<u>Laboratory Findings</u>
Diarrhea (bulky, frequent, light colored)	Fat	Increased fecal fat Decreased carotene and cholesterol
Weight loss	Total calories	Increased fecal fat and nitrogen
Malnutrition		Decreased xylose and glucose absorption
Abdominal distention		
Weakness and fatigue		
Edema	Protein*	
Anemia, iron deficiency megaloblastic	Iron Vitamin B <sub>12</sub> folic acid, Vitamin C & E	Reduced serum iron Low serum Vit B <sub>12</sub> & folate Reduced Vitamin B <sub>12</sub> absorption test
Tetany & Parasthesias (Positive Trousseau & Chvostek's sign)	Calcium Vitamin D Magnesium, potassium	Decreased serum Calcium, Mg & K
Bone, pain, pathological fractures skeletal deformity		
Bleeding, tendency (ecchymoses, melena, hematuria)	Vitamin K	Prothrombin time increased
Nocturia, abdominal distention	Water	Increased small bowel fluid: dilution of barium
Night blindness	Vitamin A	Flat Vitamin A tolerance curve
Milk tolerance	Lactose	Flat lactose tolerance curve Reduced mucosal lactase concentration

\*Protein losing enteropathy may also be associated with malabsorption syndrome.

that the pool is recycled twice during every meal (6 times a day) and the usual loss of 600 mgm bile salt and in feces during the day is compensated by synthesis from cholesterol in the liver hepatocyte. Bile salts also play a role in the absorption of fat soluble vitamins (A,D,E & K).

Pancreatic amylase hydrolyses polysaccharides to lower molecular weight sugars (oligo and disaccharides) and pancreatic trypsin (with elastase and carboxypeptidase) split proteins into peptides. Both carbohydrate and protein absorption are also dependent on an absorptive process at the intestinal mucosal surface. Oligo and disaccharides (lactose, maltose and sucrose) undergo further hydrolysis at the brush border of the microvilli with production of monosaccharides (glucose, galactose and fructose). Peptides undergo hydrolysis by peptidases on the brush border before undergoing absorption by active or facilitated transport as amino acids.

Thus, the degraded products of fats, starches and proteins, along with most of the water and electrolytes and other necessary elements, such as iron, calcium, magnesium and folate become available for absorption on the extensive villus surface of the duodenal and jejunal portions of the small bowel. Normally, absorption is so efficient that 95% of all nutrients are absorbed before they reach the upper jejunum.

The ileum normally absorbs few nutrients, but in disease states or removal of the upper small bowel, the ileum can assume a greater functional role. The ileum does, however, have two important *specific* functions:

1. To absorb Vitamin B<sub>12</sub> once it is bound with gastric intrinsic factor.
2. To actively absorb bile salts which are recycled to the liver in the portal vein and secreted again into the biliary system (entero-hepatic circulation).

The colon physiologically is important in actively absorbing sodium and water and transporting feces to be excreted. It is estimated that the colon can nominally absorb 2-3 litres of fluid per day.

It can be appreciated from this review of the interrelated processes controlling normal absorption that the process of fat absorption is dependent on: 1) the integrated emptying of stomach into the upper intestine for effective homogenization, 2) the pancreas for lipase pro-

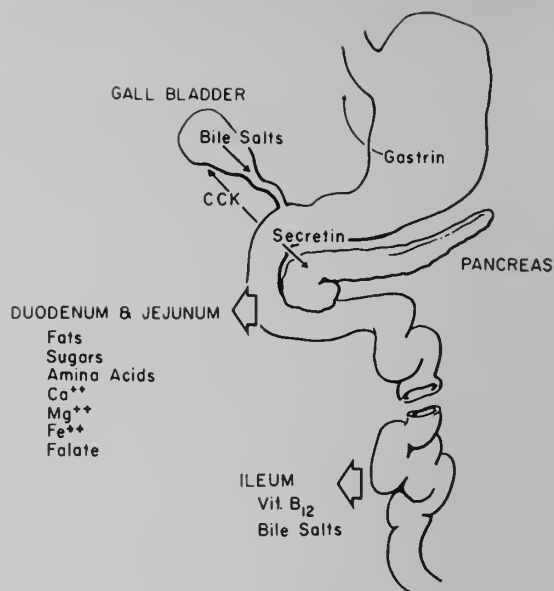


FIG. 1 Shows the main sites in the intestine for reabsorption of nutrients

duction, 3) the liver and biliary tract for bile salt secretion, 4) jejunal mucosa for fatty acid absorption and chylomicron formation and 5) lymphatic system for mobilization. It is vulnerable to a variety of pathological processes in different organ systems. Steatorrhea is the hallmark of such malabsorption processes. Isolated defects of fat, protein or carbohydrate may occur alone, although in most diseases, all three nutrients are affected to a greater or lesser extent. A list of conditions causing the malabsorption syndrome are shown in Table II<sup>1</sup>, listed under the major pathogenetic mechanism responsible.

#### Clinical Tests to Establish a Diagnosis<sup>2,3</sup>

Patients suspected of having the malabsorption syndrome should have hematologic and serum determinations made, specifically a CBC, sedimentation rate, serum calcium, phosphorus, alkaline phosphatase, iron, prothrombin time and protein electrophoresis. Serum B<sub>12</sub> and folate levels may also be helpful if macrocytic anemia or ileal disease is suspected. These determinations will delineate specific deficiencies that may need therapeutic replacement and also give clues to the site and etiology of the absorptive disorder. In addition, specific tests for steatorrhea and two other screening tests for fat malabsorption should be done. *Sudan III* staining of the stool can be done easily in the office laboratory by mixing



Table 2

## CAUSES OF THE MALABSORPTION SYNDROME

1. Defective Intraluminal Hydrolysis:
  - Stomach resection
  - Pancreatic insufficiency
  - Gastric Hypersecretion of acid
    - Non B islet cell tumor of pancreas
    - Massive small bowel resection
  - Exclusion or deficiency of conjugated bile salts
    - Biliary obstruction
    - Biliary cirrhosis
    - Ileal resection
2. Primary Mucosal Cell Abnormality:
  - Celiac disease
  - A-beta-lipoproteinemia
  - Disaccharidase deficiency
  - Monosaccharide malabsorption
  - Cystinuria and Hartnup disease
  - Absence of B<sub>12</sub>-IF receptor
3. Inadequate Absorptive Surface:
  - Massive small gut resection
  - Ileal resection or by-pass
  - Jejunal by-pass
    - Jejunocolic fistula (large)
    - Surgical gastroileostomy
4. Abnormalities of the Intestinal Wall:
  - Ileojejunitis, granulomatous and nongranulomatous
  - Infectious enteritis
  - Amyloidosis
  - Drug effects
  - Radiation injury
  - Eosinophilic enteritis
  - Mastocytosis
5. Lymphatic Obstruction and Stasis:
  - Lymphoma
  - Tuberculosis (tabes mesenterica)
  - Lymphangiectasis
6. Bacterial Overgrowth and Parasitic Infections:
  - Blind loops
  - Multiple jejunal diverticula
  - Multiple strictures
  - Enterointeric or enterocolic fistulas
  - Scleroderma
  - Whipple's disease
  - Tropical sprue
  - Giardia lamblia
  - Strongyloidiasis
7. Miscellaneous:
  - Carcinoid syndrome
  - Diabetic neuropathy
  - Hypoparathyroidism
  - Hypothyroidism
  - Hypogammaglobulinemia
  - Mesenteric artery insufficiency
  - Vasculitis (systemic lupus erythematosus, Degos' disease)

a small amount of stool and saline on a microscopic slide and adding a drop of Sudan III and acetic acid. Microscopic examination will show greater than two yellow-orange globules per HPF if steatorrhea is present<sup>4</sup>. A serum carotene concentration of less than 60  $\mu\text{g}/100$  ml may indicate fat malabsorption. The lowest values are found usually in disorders of intestinal rather than pancreatic origin. Low values may, however, also occur in states of malnutrition.

If steatorrhea is suspected clinically, a 72 hour stool fat collection<sup>3</sup> is the most reliable test to substantiate it. After 3-4 days on at least a 50 gm fat diet, the total stool output is col-

lected for 72 hours. A value for excretion of greater than 6 gm fat/day, indicates fat malabsorption. The radioactive introduced  $I^{131}$ -triolein absorption tests have not proved consistently reliable. The cause of this fat malabsorption may be any of the etiologic categories listed in Table II. For instance, bypass of the duodenum in a Bilroth II anastomosis may prevent fat from mixing properly with lipase and bile. Intestinal mucosal diseases (celiac disease) block the mucosal phase of fat absorption, as does intestinal lymphatic obstruction by lymphoma or lymphangiectasia. Bile salt deficiencies, whether caused by biliary obstruction, ileal disease or resection and bacterial overgrowth result in inadequate micelle formation: pancreatic disease deprives the intestine of lipase needed for fat absorption. Generally, the greatest degree of fat malabsorption is found in pancreatic insufficiency, daily fecal fat often exceeding 30 g/day. In intestinal disease states and bile acid deficiencies, the value is generally 15-20g/day. Misleading high values may be found in patients with high dietary oil intake or castor oil laxatives.

If steatorrhea is detected by these tests, one should proceed to perform a *D*-xylose and Schilling test; an abnormality in these tests would usually favor an intestinal absorptive problem rather than a digestive disorder. Xylose is a five-carbon monosaccharide that is passively absorbed from the jejunum. The fasting



FIG. 2 Pancreatic calcification in a patient with malabsorption due to exocrine pancreatic disease

patient is given 25 gm of D-xylose orally and a 5-hour urine collection is obtained. Urinary excretion greater than 4.5 gm of xylose in 5 hours is normal. Low values usually indicate mucosal disease of the small bowel preventing xylose from being adequately absorbed, or rarely bacterial overgrowth in the small intestine resulting in increased bacterial utilization of the sugar. Pitfalls in the use of this test include: inadequate fluid intake during the urine collection, intrinsic renal disease, presence of ascites and vomiting of the ingested xylose. The xylose test will be normal in pancreatic or localized ileal disease. A Schilling test is performed by giving the patient oral radiolabelled Vitamin B<sub>12</sub> with intrinsic factor. Parenteral unlabelled B<sub>12</sub> is given beforehand to insure adequate body stores. Normally > 7% of the radiolabelled Vitamin B<sub>12</sub> should be excreted in the urine in 24 hours. An abnormally low excretion means mucosal disease of the ileum preventing the absorption of Vitamin B<sub>12</sub> or bacterial overgrowth in the small bowel causing increased utilization of Vitamin B<sub>12</sub>. Bacterial overgrowth can be suspected by reappearance of normal urinary excretion after antibiotic therapy. An artificially low urinary excretion may occur in states of dehydration, intrinsic renal disease and with incomplete urine collection.

To characterize a patient with suspect blind loop syndrome, *aspiration of intestinal fluid* may be performed<sup>2</sup>. A sample of jejunal fluid is obtained through a polyvinyl tube and cultured after serial dilution. Colony counts greater than 10<sup>5</sup> organisms and the presence of anaerobic organisms will be diagnostic. In addition, analysis of the fluid by thin layer chromatography for free (unconjugated) bile salts can be carried out. Another interesting recent procedure which shows promise has utilized a *breath test* for detected bacterial deconjugation of C<sup>14</sup>-glycine cholate<sup>5</sup>.

The only carbohydrate malabsorption found with any frequency is lactose intolerance, resulting from deficiency of the enzyme lactase at the intestinal brush border. This defect prevents milk lactose from being split to glucose and galactose and results in diarrhea. The *lactose tolerance test* consists of giving 50 gms of lactose orally and measuring the blood glucose every half hour. Lactose deficiency is present if the blood glucose fails to rise 20mg% above



FIG. 3 Ileal involvement in Crohn's disease. This patient had steatorrhea due to bile salt deficiency and an abnormal Schilling test.

baseline and the patient experiences abdominal cramps and diarrhea.

A diagnosis of pancreatic malabsorption is supported by evidence of previous episodic pancreatitis and calcification with hyperglycemia. Direct measurement of pancreatic exocrine function by secretin-Pancreozymin stimulation tests are not widely utilized. They are difficult to perform and interpret. A *Lundh meal test* is a simpler procedure, which involves the sampling of duodenal contents after a standard liquid meal and measurement of trypsin concentrations. It has been useful in defining exocrine pancreatic failure<sup>6</sup>.

Once the malabsorptive state has been established, the search should proceed for a specific etiology. *Microscopic study* of the stool is in order to look for assorted ova and parasites. Giardiasis is the most common culprit, especially if hypogammaglobulinemia is present and can be found in the stool, duodenal aspirate or jejunal biopsy.

A complement of *x-ray studies* are usually valuable and should be interpreted by a skilled radiologist. A flat-plate of the abdomen may show pancreatic calcifications. An upper gastrointestinal series and small bowel series, including good views of the distal ileum, may show many abnormalities: fistulous connections be-



**Table 3**  
**THERAPEUTIC APPROACH TO THE**  
**MALABSORPTION SYNDROME**

Dietary Therapy	
General dietary measures	High caloric diet 30-40 g fat 80-90 g protein
Medium chain triglycerides (Supplements caloric intake)	20 g tid of the oil or Portagen powder
Celiac disease	gluten free diet
Lactose intolerance	exclude fresh milk and ice cream
Replacement Therapy	
Pancreatic extract	Pancreatin (Viokase) or Pancrelipase (Cotazym) 2-3 g with meals (Supple- mentary NaHCO <sub>3</sub> , 600 mg with meals when severe)
Bile salts	Poorly tolerated in thera- peutic doses (2-3 g with meals)
Supplementation Therapy	
Vitamins	
A	Oleovitamin capsule (25,000 U) 1 capsule/day
D	100,000 U I.M. initially 10,000 U calciferol p.o. qd
K	10 mg Phytonadione
B <sub>12</sub>	Cobalamin U.S.P. 100 mcg/mo IM
Folic acid	10 mgms folic acid mg, p.o. qd
Calcium	Calcium gluconate 3 gm p.o. tid
Magnesium	Magnesium, milk of mag- nesia 30 ml p.o. qd
Iron	Ferrous sulphate 300 mgm p.o. tid
Potassium	KCl (10% sol.) 15 ml, tid
Intestinal resection	Cholestyramine 3 gm p.o. tid
Curvative Therapy	
Blind Loop Syndrome	Surgical management of the anatomical abnormality, if practicable Tetracycline 250 mgm, qid for 15 days
Whipple's disease	Tetracycline 250 mgm, qid
Tropical Sprue	Tetracycline 250 mgms qid
Intestinal Parasites	Metronidazole 500 mg tid
Giardiasis	(Flagyl) for 7 days
Strongyloidiasis	Thiobendazole, 25 mgm/Kg dose x 3.

tween different levels of bowel, Crohn's disease, the hypertrophic gastric and intestinal folds of Zollinger-Ellison syndrome, mass lesions of lymphoma, the hypoperistaltic and dilated proximal small bowel loops of scleroderma and the non-specific "malabsorption pattern" of sprue.

*Peroral biopsy*<sup>7</sup> of the jejunum is an important diagnostic procedure and has few complications. Biopsy (aided by fluoroscopy) is taken at the level of the ligament of Triety. Four conditions occur in which the jejunal

biopsy is always diagnostic:

1. Celiac disease — villi are very short and the lamina is infiltrated with inflammatory cells. After treatment with gluten-free diet, the architecture returns toward normal.

2. Whipple's Disease — the lamina is filled with large macrophages laden with PAS positive staining materials.

3. Abetalipoproteinemia — chylomicron formation is impaired and fat-filled vacuoles appear in the upper part of the intestinal villi.

4. Agammaglobulinemia — distinct absence of plasma cells in the mucosa with varied villous appearance.

In addition, peroral biopsy may often be helpful in the diagnosis of eosinophilic enteritis lymphoma, mastocytosis, amyloidosis and hypogammaglobulinemia with giardiasis.

#### Treatment of The Malabsorption Syndrome<sup>1</sup>

Once the etiology of the malabsorptive disorder has been determined, management can begin with appropriate treatment. Symptomatic diarrhea may be controlled with anti-diarrhea agents [Diphenoxylate (Lomotil), codeine, or paregoric], according to the physician's personal preference; although this is rarely useful except after extensive small intestinal resection. Management is primarily related to:

1. Dietary control of diarrhea with a low fat (30-40g) high calorie diet.

2. Removal of gluten or lactose from the diet in coeliac disease or patient with lactose intolerance.

3. Replacement therapy for pancreatic insufficiency.

4. Supplementation to augment absorption of electrolytes and vitamins.

5. Curative surgical therapy for blind loop syndrome and chemotherapy of intestinal parasites or bacterial growth (Whipple's disease or blind loop syndrome).

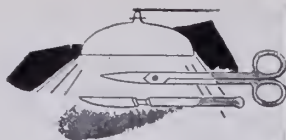
A suitable schema for management is provided in Table III.

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(References continued on page 271)





# GRAND ROUNDS



The University of Kentucky College of Medicine

This Journal feature will be presented alternately by the University of Louisville and the University of Kentucky Departments of Medicine and Departments of Surgery. We hope to have these features revolve around subjects of immediate practical interest to the practicing physician; and, for those of us not able to attend grand rounds in the teaching centers as often as we might, we hope this will represent a bit of a refresher course.

## Post Streptococcal Diseases, Part II† Acute Glomerulonephritis

**A**LTHOUGH acute post streptococcal glomerulonephritis is usually considered a disease of childhood, sporadic cases in adults are not uncommon. Approximately eight adults each year are transferred to University Hospital because of severe acute post streptococcal glomerulonephritis. Kentucky Department of Public Health vital statistics show 15 deaths from acute nephritis in Kentucky in 1970 suggesting that the annual incidence of nonfatal cases must number in the hundreds. The disease is of major interest to renal immunopathologists because it tends to serve as a clinical model for immune-complex glomerulonephritis. Glomerulonephritis (of uncertain etiology in most cases) has become the leading cause of end stage renal failure in patients presenting to dialysis and transplant units<sup>1</sup>. Because the literature about streptococcal nephritis is so voluminous the following discussion will be limited to recent clinical information derived from the application of renal biopsy to clinical disease. In addition, the pathophysiology in regard to immuno-complex disease will be briefly reviewed. A comprehensive review of streptococcal nephritis may be found elsewhere<sup>2</sup>.

### Pathogenesis

Experimental work has indicated two basic types of immunological disease involved in glomerulonephritis<sup>3</sup>. The first and most common variety is that of immune-complex disease in which foreign antigen evokes a serum sickness type reaction resulting in the accumula-

tion of soluble antigen-antibody complexes and complement fixation in the renal glomerulus. This reaction evokes a secondary inflammatory response and in some cases activation of the coagulation mechanism. In this form of glomerulonephritis the kidney is considered to be an innocent bystander (the kidney contains the largest number of filtering capillaries per unit organ weight). The second form of glomerulonephritis is that associated with anti-glomerular basement membrane antibody which attacks the host glomerular basement membrane. This mechanism appears to be responsible for the nephritis in Goodpasture's Syndrome and some cases of nonstreptococcal rapidly progressive glomerulonephritis. The clinical counterparts of the first type (immune-complex) are post streptococcal glomerulonephritis in which streptococcal antigens are at fault and systemic lupus erythematosus nephritis in which DNA (of uncertain origin) has been identified as the offending antigen. The sequence of events, however, is more complicated than this oversimplified version as illustrated by the differences in complement metabolism in these two diseases. In lupus nephritis activation of complement at the beginning of the complement cascade occurs as would be anticipated in a complement fixing antigen-antibody reaction. In post streptococcal glomerulonephritis, however, there is a disproportionate reduction in the C<sub>3</sub> component of complement and recent work has shown a serum factor which may be responsible for C<sub>3</sub> breakdown in acute post streptococcal nephritis<sup>4</sup>. Nevertheless, electron microscopy in streptococcal nephritis shows irregular subepithelial deposits, and immunofluorescent staining is positive for both

†From the Department of Medicine, University of Kentucky College of Medicine, Lexington. Part I Acute Rheumatic Fever, was presented in the December, 1972, issue of *The Journal*, page 931.

Beta-1 complement and IGG in a lumpy, bumpy, granular pattern corresponding to the subepithelial deposits. Demonstration of streptococcal products within these complexes remains difficult.

There are certain basic differences between acute rheumatic fever and post streptococcal glomerulonephritis which are worthy of note. Many sera types of Group A beta hemolytic streptococci have been associated with rheumatic fever but the development of this disease does not seem to occur after streptococcal skin infections. In contrast, nephritis occurs after both respiratory and skin infections but requires infection with specific nephritogenic strains of Group A streptococci. Repeat attacks are common in acute rheumatic fever but quite rare in post streptococcal nephritis. Noble has noted that the hypothesis of cross reactive antigens (similarity between streptococcal products and cardiac muscle antigens) remains attractive in rheumatic fever but that the possibility of direct cellular injury by the streptococcus has not been excluded<sup>5</sup>. Cross-reacting antigens do not appear to be primarily responsible for nephritis but localization of streptococcal antigen-antibody complexes to the glomerulus might be facilitated by tissue antigens sharing common antigenic determinants with the streptococcal organism<sup>6</sup>.

### Clinical Course

#### *Other Types of Immune-Complex Nephritis*

Before discussing some of the clinical syndromes associated with streptococcal nephritis it is well to point out other diseases which mimic streptococcal nephritis. Acute immune-complex nephritis may follow infection with pneumococcal pneumonia, staphylococcal infection of atrioventricular valves, certain forms of malaria, varicella and several other infectious diseases. A newly discovered form of chronic progressive glomerulonephritis known as chronic membranoproliferative (also called hypocomplementemic or mesangio-capillary glomerulonephritis) may present with acute nephritis and low serum complement. In this disease, however, transiently depressed serum complement does not return to normal (as it does in streptococcal nephritis) and a progressive course occurs, eventually leading to terminal renal failure. It is quite likely that many of

the cases of chronic glomerulonephritis thought to be associated with streptococcal disease in the past were in fact examples of membranoproliferative glomerulonephritis in which streptococcal infection apparently plays no role.

#### *Epidemic and Sub-Clinical Nephritis*

The clinical presentation of streptococcal nephritis, even in epidemic form, is often that of the acute nephritic syndrome (hematuria, proteinuria, edema, hypertension of acute onset) several weeks after the onset of streptococcal infection. Renal biopsy along with appropriate serological data, however, has shown that many cases of streptococcal nephritis are sub-clinical. These cases are manifested only by microhematuria and proteinuria (which sometimes is not even present) and are diagnosed only after a high index of suspicion on the part of the physician. In widescale epidemics, often involving streptococcal pyoderma and usually occurring in children, the disease usually runs a benign course. A 10-year follow-up of a well-studied epidemic at the Redlake Indian Reservation revealed that 98.4% of the children had recovered and that one child (1.6%) had died during the acute attack<sup>7</sup>. In contrast, acute sporadic disease in childhood may follow the pattern of disease in the adult which is listed below.

#### *Acute Nephritis*

Typical presentation of classical acute nephritis includes some, but usually not all, of the components of the acute nephritic syndrome, diminution of urine volume for several days, and transient azotemia. Spontaneous improvement begins after several weeks resulting in cure or prolonged remission (see section on chronic glomerulonephritis) in the vast majority of patients. Microscopic hematuria and residual histological changes often remain present for several years and are not cause for alarm in the absence of persistent hypertension, heavy proteinuria or azotemia. The development of nephrotic syndrome in the course of the disease is more common in adults than is generally recognized and in one biopsy series constituted a 10% of adults with nephrotic syndrome. The development of this complication in general indicates more severe glomerular basement membrane damage and raises the possibility of progressive disease. However, the



majority of these patients in my experience eventually recover.

### Severe Forms

In approximately 1 to 3% of hospitalized cases, acute renal failure with prolonged oliguria may occur. This complication was invariably fatal in the past but with the advent of aggressive therapy, including hemodialysis, the majority of patients have recovered and done well for up to eight years<sup>8</sup>. Those patients, however, in whom persistent azotemia and nephrotic syndrome or oliguria are associated with many crescents (greater than 70% of glomeruli) upon renal biopsy tend to have a progressive course with development of end stage renal failure within 6 to 24 months. This syndrome of rapidly progressive glomerulonephritis following streptococcal infection has been well documented but fortunately is rare. It should be remembered that the majority of patients with rapidly progressive glomerulonephritis do not have streptococcal infection.

### Relationship to Chronic Glomerulonephritis

While the short and intermediate course of post streptococcal nephritis are reasonably clear the long-term prognosis of those children and adults with a sporadic attack remains controversial. Several years ago it had become apparent that the great majority of patients with chronic glomerulonephritis did not have previous evidence of streptococcal disease and with the discovery of other forms of non-streptococcal glomerulonephritis the pendulum had swung away from the opinion that streptococcal disease was responsible for most cases of chronic glomerulonephritis. Recently, however, Baldwin has presented some circumstantial evidence for the development of hypertension and glomerular sclerosis after a long quiescent period in adults with previous streptococcal disease and has raised the possibility of progressive disease in these patients<sup>9</sup>. At any rate the prognosis in the overwhelming majority of patients is excellent for the first 15 years and an open mind should be kept about the longer term prognosis.

### Treatment

The acute treatment of streptococcal nephritis has been well reviewed by Kassirer and is available from the National Kidney Foundation<sup>10</sup>. The initial mortality rate of 5% in the

past has been lowered by the use of better antihypertensive drugs and potent diuretics such as furosemide and ethacrynic acid in order to control hypertension, heart failure and encephalopathy which were the leading causes of death in the acute phase. As previously mentioned, oliguric acute renal failure can be controlled with dialysis, resulting in recovery in the majority of these patients. The old practice of prolonged bed rest for six months is now discouraged and bed rest during the acute phase for several weeks only is recommended. Antibiotic therapy has not been shown to produce amelioration of the acute attack or even to prevent development of nephritis in infected patients. However, antibiotics are still recommended in order to reduce colonization and spread of the streptococcus to contacts of the patient. Although steroid therapy is occasionally used in the acute phase there has been no convincing evidence that steroids improve the prognosis and on the other hand steroids may cause exacerbation of hypertension and other serious side effects. In severe cases, particularly those associated with progressive renal failure and crescents, anticoagulation with heparin has been reported to diminish the secondary role of coagulation and improve prognosis<sup>11</sup>. As yet a controlled trial with heparin has not been performed. Finally, in those few patients who develop a progressive course, renal transplantation has been performed successfully<sup>12</sup>.

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CHARLES D. LEONARD, M.D.



## SPECIAL ARTICLES

### Utilization Review In The Small Hospital†

HENRY B. ASMAN, M.D.\*

THERE are, no doubt, many times in everyone's life when he would have been wiser to have kept his mouth shut. One of those occasions in my life was when I volunteered to appear on this program. To compound the problem, once I did speak when I should have been quiet, I neglected to get on the same wave-length with Mr. Knighten and, as a result, the subject I chose to discuss, though related, is not that which appears in your program.

Sometimes things work out better than one has a right to expect, however, so I trust that the challenges I throw out to you today in discussing utilization review in the small hospital will have equal application to the more general subject of the Medical Consultant's Role in Promoting Effective Provider Utilization Review.

Having practiced a rather limited specialty in a metropolitan area for some 33 years prior to assuming my duties as a Medical Consultant to the Medicare Division of Kentucky Blue Cross about 15 months ago, I certainly have no illusions about my expertise (or lack of it) in the area of utilization review in the small hospital.

The subject was chosen deliberately, however, for the obvious reason that I know very little about it, and hope that by getting it on the floor for discussion I would be able to learn from you some of the things I so badly need to know.

There are, I believe, only a relatively few areas in the country which can boast of really effective hospital utilization review, and these, for the most part, are concentrated in the more

metropolitan areas and a few enlightened states which saw the need for this essential activity a decade or so ago. Kentucky, however, has always been known as a "backward state" and, though we don't agree with that in many respects, and feel that Kentucky is moving ahead, the fact remains that we are a predominantly rural state and have all of the problems peculiar to this way of life.

Kentucky has 120 counties and 39, or 32.5% of them, have three or fewer physicians. Sixty-two counties, or slightly more than one-half of the total, have six or fewer physicians.

We have 124 hospitals certified by the State Agency and for which Kentucky Blue Cross serves as Intermediary. Forty-six of these hospitals have a bed capacity of 50 or less, while another 18 institutions have between 51 and 75 beds. This means, of course, that more than one-half of the hospitals in Kentucky have fewer than 76 beds.

As a further bit of historical background, peer review in my area until very recently has consisted primarily of claims review, and, in this area, I believe we have a pretty good track record. Only in the past few months, but prior to PSRO legislation, have we really attempted to switch our emphasis to utilization review or quality control of medical care.

Being firmly committed to the concept that effective utilization review must start at the level of the hospital, I have burdened you with this introductory material to emphasize the magnitude of the problem we face. How do you conduct effective utilization review in a hospital whose medical staff consists of two to five over-worked physicians?

In researching this subject for presentation here today, I found a real dearth of material in the literature, leading me to believe that I

†Speech made to the Medicare Medical Consultants Region IV in Atlanta on January 10, 1973.

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am not alone in being unable to come up with reasonable and workable solutions to the problem.

How does a physician tell the only other physician on the staff that he is keeping this patient in the hospital too long, or that he is ordering too many laboratory tests or x-rays—especially when the other physician is his partner, or covers for him on weekends or on that rare vacation, or they mix in the same social circles. The simplistic answer is that, when he is reviewing charts, he must put all other considerations aside and be completely objective. But, is that the answer? Is that a realistic answer? I think not!

We must somehow give these physicians the tools they need to carry out such review and improve the quality of medical care.

**Table 1**  
**HOSPITALS IN KENTUCKY**

No. of Beds	Total	% of Total
1 - 50	46	37.1
51 - 75	18	14.5
76 - 100	11	8.9
101 - 150	19	15.3
Over 150	30	24.2
Total	124	100.0

A seldom mentioned factor in the overall utilization of a small hospital is the lack of incentive to eliminate unnecessary hospitalization or excessive length of stay. These hospitals, lacking the sophisticated facilities and diagnostic equipment found in the larger hospital and medical center, generate most of their income from bed occupancy. It is not surprising then that there is no stimulus from the Administrator or Governing Board to discharge patients just as soon as they have reached maximum benefits of hospitalization. Empty beds contribute to overhead but produce no revenue.

The physician himself may have no incentive. With a daily office work load of 75 to 100 patients, it is much more simple and less time consuming to see 10 or 15 patients in the hospital, rather than make house calls up and down the "hollers" of Eastern Kentucky. That this is done for the convenience of the physician, and does not represent the optimum utilization of health care facilities, is unquestioned. But it is a fact of life.

A recent case illustrates the point. In conducting medical review of Medicare claims

from a 40-bed county hospital with a two-man staff, one would gain the impression that there was an excessive number of long-stay cases. The overall average length of stay in this hospital, however, proved to be 4.1 days, lowest in its peer group. Then the computer told us that approximately 50% of the admissions were one- and two-day stays, and further investigation showed that most of these admissions were not diagnostic, as one might think, but occurred in the late evening or during the night. The preliminary conclusion, pending further study, is that one or both of these physicians are substituting an overnight hospital admission for a house call. How does one convince these physicians that this constitutes an abuse of hospital facilities—other than by denying payment of claims and thus penalizing the patient? These two physicians form the Utilization Review Committee in this hospital, and the minutes carefully record the fact that each reviews the other's charts (and never their own), but never is there a finding that hospitalization is no longer necessary, or that the admission itself was unnecessary.

One suggested answer for a situation such as just described is the formation of area-wide or regional utilization review committees, combining the review activities of several hospitals and skilled nursing facilities. This sounds like a reasonable procedure until one realizes that there are communities in Kentucky which are ten miles apart "as the crow flies" (across the mountain) but 40 to 50 miles apart by the only available road. The time and travel involved seems to raise serious questions as to the feasibility or effectiveness of this plan.

The use of the itinerant radiologist, pathologist or visiting consultant as a member of the Utilization Review Committee has also been suggested. We have numerous hospitals in Kentucky which cannot boast of these "luxuries". X-ray films and laboratory specimens are sent to a medical center or independent laboratory and EKGs are transmitted by phone for interpretation. Seriously ill or injured patients, and most major surgical cases, are transferred to larger hospitals. I'd hate to think that these situations are peculiar to Kentucky!

So—where does that leave us?

Earlier, I made the observation that we must provide the tools to the physicians in small



hospitals to enable them to carry out effective review and improve the quality of care. I also pleaded my lack of expertise in the area which I had undertaken to discuss. From this position of "lack of strength", may I then suggest that the most meaningful solution to this problem lies in the area of education. Education is really what utilization review is all about—if we are interested in quality care, and not just in dollars.

Just as we must crawl before we walk, I believe the first phase of this educational process is to convince our peers, the physicians, of the validity of the concept of utilization review. Some progress is being made in this area, however, slowly, and I am naive enough to believe that the vast majority of the members of the medical profession will respond once they are shown that this is not a punitive mechanism, but rather an opportunity to improve the quality of their services to their patients.

Secondly, if we expect the physician to review for quality care he must be provided with "standards" against which he can measure "performance". These standards must not be too rigid in their formulation but, rather, should be looked upon as guidelines. They cannot be national in scope but should be developed on a state or regional level with local input from physicians whose knowledge and expertise will guarantee that the standards will be high but realistically capable of being achieved. The Kentucky Foundation for Medical Care, an arm of the Kentucky Medical Association, is presently developing such criteria for the most common diagnoses leading to hospitalization. We have made liberal use of the excellent information already available from such sources as HUP, PAS, the Pennsylvania Medical Society, and others, but have guaranteed the Kentucky input by including on our panels physicians from all facets of our Association: the University professor, the specialty societies and the Academy of Family Practice, whose members range from the small rural areas to the metropolitan centers. When our task is completed, we intend to place a copy of these criteria in the hands of every hospital utilization review committee as well as the county, district and state peer review committees. Depending upon the development of sufficient financial support, it is our hope that a copy of the Manual can be placed at every Nursing

Station in each of the 124 hospitals, for this is where on-going utilization review should take place. A rather utopian thought, again dependent on financial resources, is the idea of printing the criteria in a pocket-size booklet for distribution to every physician practicing in the State. And, finally, these norms will be made available to all of the third party payors.

In this way it is hoped that everyone will be "playing the game with the same set of rules." The physician will know the criteria by which the quality of the care he renders will be appraised and the standards which he must strive to attain. The third parties will have these same standards, developed by physicians, on which to base their determinations. Then, only the exceptions—the patterns of practice which fall outside the guidelines—will be necessary to refer to peer review.

Table 2

## SKILLED NURSING FACILITIES\*

No. of Beds	Total	% of Total
1 - 25	7	14.0
26 - 50	21	42.0
51 - 75	10	20.0
76 - 100	8	16.0
101 - 125	2	4.0
126 - 150	1	2.0
Over 150	1	2.0
Total	50	100.0

\*For which Kentucky Blue Cross serves as Intermediary

The third facet of educational endeavor is continuing medical education. If the physician is convinced that he needs constantly to update his store of medical knowledge, and peer review, or medical care appraisal, shows where that need lies, then through continuing medical education the need can be met and the quality of medical care enhanced.

Now, where does our responsibility, as Medicare Medical Consultants, lie in all of this.

Part of our responsibilities are mandated in the Medicare law, which requires in the Conditions of Participation that every provider have a Utilization Plan and a functioning Utilization Review Committee. Most of us will agree, I believe, that the effectiveness of many of these committees leaves much to be desired. They are little more than rubber stamps—going through the motions—with little knowledge, understanding or acceptance of Medicare regulations and guidelines, merely trying to satisfy



the letter of the law. As Medicare Consultants, do we not have an obligation, in fairness to the patient, the provider and the taxpayer, to make every effort to improve the effectiveness of the Utilization Review Committees, even if it means some initial irritation and antagonism between us and our peers?

Additional responsibilities in the area of utilization review will no doubt come into clearer perspective when the PSRO regulations become finalized and are issued. Abstracts and summaries of the PSRO portion of the H.R. 1 have been made available from various sources but, as we all know, until the Secretary issues the regulations, interpretations are mere conjecture and I will not take the time of this group in attempting to discuss them—other than making one observation. It is apparent that considerable emphasis will be placed on the hospital utilization review committee, provided that the committee demonstrates that it can do a "satisfactory" job. And that, I suppose, is what we are talking about this morning.

We have another obligation, it seems to me, as physicians, regardless of our involvement with Medicare. I refer, of course, to our cooperation with medical associations, medical foundations and others who are attempting to develop standards of care, promote effective utilization review and stimulate continuing medical education. As Medical Consultants, we are in a unique position to detect aberrant patterns of practice involving both over- and under-utilization of health facilities and services. Working with our peers in the profession, our efforts may one day be rewarded with attainment of the goal we all seek—the best possible medical care for all of the people.

I have posed the problem of how can we obtain effective utilization review in the small hospital, and have related a few of my own thoughts on the subject, but I most certainly have not offered any definitive solution to the problem.

That—I leave to you! And I look forward to your response.

## DEPARTMENT OF LABOR

### Workmen's Compensation Board

FRANKFORT, KENTUCKY 40601

#### M E M O R A N D U M

TO: Kentucky Medical Association

FROM: Oscar Morgan, Jr., Staff Assistant  
Rehabilitation Section


SUBJECT: Vocational Rehabilitation Services for Industrially Injured

DATE: February 28, 1973

I am taking this opportunity to inform you that, pursuant to fulfilling the provisions of Kentucky Revised Statute 342.710, a Rehabilitation Section has been established within the Workmen's Compensation Board. The purpose of this Section is to restore industrially injured employees to gainful employment.

Under the revised statute, an employee is entitled to vocational rehabilitation services if he has suffered an occupational injury to the extent that he is unable to return to employment for which he has previous training or experience. These services include vocational training and job placement, as well as physical restoration services.

The primary purpose of this communication is to inform you of the availability of services to injured employees through the Rehabilitation Section of Workmen's Compensation, and to solicit your cooperation in the referral of claimants whom you feel may benefit from medical and vocational rehabilitation services.



## EDITORIALS



### Problem-Oriented Medical Record

**T**HE Problem-Oriented Medical Record is gaining great momentum. This patient chart system is being widely instituted in medical teaching facilities, including the Universities of Louisville and Kentucky. It is expected then to be adopted by all hospitals eventually to be the standard out-patient record. It replaces the familiar and uniform system used from time immemorial to now, which is now known as the "source oriented record" and which is criticized as having too little uniformity and dependability.

The Problem-Oriented Medical Record starts with a "data base" instead of the history, physical and laboratory results. The data base should be uniform for a given patient population so that various patients will benefit from appropriately tailored and detailed inquiries, the standard of which should be stable among various doctors and other medical personnel.

The guiding light at the center of the system is the "problem list" which is a permanent, growing, accurate reflection of the patient's status and which makes his record a dependable, transferable and assessable instrument. The problems are numbered, keep their numbers for life and state the situation as accurately and succinctly as possible. Thus, "epigastric pain, cause undetermined" is a valid problem or diagnosis as is "peptic ulcer"; but "rule out peptic ulcer, gallstones or pancreatitis" is unacceptable.

The progress notes are segmented into parts: 1) historical or subjective data, 2) objective data, 3) interpretation, where argument for and against gallstones, peptic ulcers and pancreatitis belong and 4) plans including depar-

tures from the original objectives. These notes are numbered to correspond with the pertinent problem and the problem list is kept current.

The criticisms of the problem oriented record include that this is pretty much what we have always done, that this makes the record more important than the patient and that the discipline of keeping the record correctly is too time-consuming. If this is what we have always done, then surely there will be no objection to the few changes in terminology for the sake of uniformity. The emphasis on the patients record as an accurate and current reflection of the patient status is surely well placed; to settle for less is to acknowledge the record's worthless estate.

One of the most important virtues of the problem oriented record system is that it makes available for assessment the patient, the doctor and the patient's care. This is an important step in introducing computer techniques into both patient care and record assessment and if these assessments are to be made in the future, the only practical method will be with computer assistance.

Only the actual practice of this method can answer the questions about its worth and durability but this is now underway. The wider the acceptance and enthusiasm by physicians, the greater the chances for success in elevating the distinction and usefulness of the medical record to its proper position. The doctor's handwriting has been subject to ridicule for centuries. It is time to make a bold effort for good records.

AEO

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# Continuing Educational Opportunities

From The

## KMA Postgraduate Medical Education Office

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### IN KENTUCKY

#### APRIL

- 19-21 Workshop and conference on Pulmonary Thromboembolism, University of Kentucky Medical Center\*. Program chairman: Kazi Mobin-Uddin, M.D. Registration fee: \$150 (conference) and \$100 (workshop), Lexington
- 19 Ninth Annual Rheumatic Disease Symposium, Health Sciences Center Auditorium, University of Louisville School of Medicine, Louisville
- 24 2nd Trustee District meeting, Owensboro Country Club, Owensboro
- 25 1st Trustee District meeting, Paducah Country Club, Paducah
- 30-May 1 Workshop on Cardiac Diagnosis and Treatment, University of Kentucky Medical Center\*. Program Chairman: Borys Surawicz, M.D. Registration fee: \$60. 11 hours AAFP credit requested.

#### MAY

- 1 13th Trustee District meeting, Ashland
- 2 14th Trustee District meeting, Pikeville
- 2-4 Symposium on Pediatric Radiology, University of Kentucky Medical Center\*, Lexington
- 8 10th Trustee District meeting, Lexington
- 9-12 Annual Meeting, Kentucky Chapter, American Academy of Family Physicians, Ramada Inn-Bluegrass Convention Center, Louisville
- 11-12 Spring meeting, Kentucky Orthopaedic Society, Rowntowner Motor Lodge, Covington
- 17 "Medical Aspects of Sports Seminar," Eastern Kentucky University, Richmond
- 24-25 Spring meeting, Kentucky Chapter, American Academy of Pediatrics and spring postgraduate course, University of Kentucky Department of Pediatrics, Lexington

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\*For further information regarding conferences and workshops at the University of Kentucky, contact Frank R. Lemon, M.D., Associate Dean for Continuing Education, College of Medicine, University of Kentucky, Lexington, Kentucky 40506.

#### JUNE

- 12 3rd Trustee District meeting, Hopkinsville
- 14-15 Emergency Room Nurses Seminar, Ramada Inn, Louisville

### IN SURROUNDING STATES

#### APRIL

- 25-26 Postgraduate course, "Peripheral Vascular Disease," Cleveland Clinic Foundation, Cleveland
- 26-28 Congress on Medical Ethics, sponsored by AMA Judicial Council, Washington Hilton Hotel, Washington, D.C.
- 29-30 Congress on Environmental Health, sponsored by AMA, Ambassador West Hotel, Chicago

#### MAY

- 9-10 Postgraduate course, "Advances in Dermatology," Cleveland Clinic Foundation, Cleveland
- 12 Postgraduate course, "Gastrointestinal Endoscopy: Techniques and Applications," Cleveland Clinic Foundation, Cleveland

#### JUNE

- 24-28 AMA Annual Meeting, Americana Hotel, New York

## Ky. ENT Society To Hold 1st Meeting May 2-3

The first annual meeting of the Kentucky ENT Society is scheduled for May 2-3 to be held at the Kentucky Colonel Inn in Louisville.

Featured speakers for the two-day event, which begins with registration at 4 p.m. on May 2, are Robert D. Lindberg, M.D. and Richard H. Jesse, M.D., both from Anderson Hospital in Houston, Texas.

A business meeting will be held on Wednesday evening, May 2, followed by the evening lecture presented by Doctor Lindberg entitled "Radiotherapy, Before or After Surgery."

Doctors Jesse and Lindberg will present lectures on numerous subjects during the Thursday morning scientific program.





## ORGANIZATION SECTION



### KMA Annual Meeting Accredited As Education Course By AMA

During the 1972 KMA Annual Meeting, an AMA Survey Team reviewed the various program sessions for purposes of scientific and educational content. The Survey Team, which was composed of physicians, is part of a mechanism developed by the AMA to accredit continuing medical education courses and opportunities offered by state medical associations. Notification was recently received that, on the basis of the Survey Team Report, the AMA Council on Medical Education had approved the KMA Annual Meeting as an accredited continuing education course.

According to the Survey Team's report of their review, some outstanding portions of the Annual Meeting were the consistent excellence of scientific content and coordinated specialty group meetings. The Team also commented favorably on the large number of member participants who registered and the supporting technical exhibits.

It is anticipated that this accreditation will be a beneficial supplement to a statewide continuing education system being considered by the KMA Medical Education Committee.

The members of the Scientific Program Committee are to be highly commended for their outstanding work in structuring the scientific sessions of the Annual Meeting and engaging speakers of national prominence. The KMA Meeting will be listed in an August, 1973 issue of the *Journal of the American Medical Association* as an accredited continuing education course.

### Kentucky Represented By 15 At AMPAC Workshop

The AMA-AMPAC Public Affairs Workshop held March 10 and 11, 1973, in Washington, D. C. was attended by 15 KEMPAC representatives. Political experts Neil R. Peirce, Richard M. Scammon and F. Clifton White gave their views on the effect of the 1973 election on the American political system.

The Workshop sessions covered such subjects as PAC membership, improving communication effectiveness, candidate support committees, state PAC Board organization, the physician's role in campaign management and evaluation and federal health legislation and regulation.

An analysis of federal health legislation was discussed by a panel composed of Russell B. Roth, M.D., President-Elect of AMA; U.S. Representative James F. Hastings (R-N.Y.); U.S. Senator J. Glenn Beall,

Jr. (R-Maryland) and John Zapp, D.D.S., Deputy Assistant Secretary of Legislation (Health), U.S. Department of HEW.

KEMPAC was honored by being presented the second place Women Membership Award at the AMPAC Annual Banquet. Political satirist Mark Russell, who has become a tradition, gave his usually excellent presentation.

George Bush, Chairman, Republican National Committee, and Robert Strauss, Chairman of the Democratic National Committee, were present at the final session and provided information on the past and future course of national politics which was followed by an interesting question and answer session.

KEMPAC members in attendance at the meeting were former AMPAC Chairman, Hoyt D. Gardner, M.D. and Mrs. Gardner, Vice-Chairman, KEMPAC Board; Lee C. Hess, M.D., KMA President; Robert N. McLeod, Jr., M.D., Chairman, KMA Board of Trustees; Fred C. Rainey, M.D., Chairman, KEMPAC Board; Mrs. George W. Schafer, President, Woman's Auxiliary to KMA; Mrs. William Pearson, KEMPAC Board Secretary; Carl Cooper, Jr., M.D., KEMPAC Assistant Treasurer; Bennett L. Crowder, M.D., KEMPAC Director; Donald C. Barton, M.D., KEMPAC Director and Mrs. Barton; Mrs. T. Robert Taylor; Robert G. Cox, KMA Executive Director and Jerry E. Mahoney and Gilbert L. Armstrong of KMA staff.



William P. McElwain, M.D., Commissioner of Health, (left) discusses matters of environmental interest with Thomas O. Harris, Commissioner for Natural Resources and Environmental Protection (center) and John E. Trevey, M.D., Lexington, Chairman of the KMA Committee on Environmental Quality (right). Commissioners McElwain and Harris recently attended a meeting of the Committee on Environmental Quality held at the KMA Headquarters Office in Louisville.

## Ky. Surgical Society To Meet May 25, 26 at Jenny Wiley

The annual spring meeting of the Kentucky Surgical Society will be held May 25 and 26 at Jenny Wiley State Park in Prestonsburg.



Doctor Skinner

David B. Skinner, M.D., Professor and Chairman of the Department of Surgery, University of Chicago Hospitals and Clinics, will be the featured speaker for the two-day session. Editor of the *Journal of Surgical Research*,

Doctor Skinner will speak on "Gastroesophageal Reflux and Hiatal Hernia" and "Mesenteric Vascular Disease."

In addition to Doctor Skinner's presentations, papers will be presented by several members of the Kentucky Surgical Society.

## Ky. Honored By AMA Conference

The Membership Achievement Award was presented to the Kentucky Medical Association on February 18, by the 1973 AMA National Leadership Conference "in behalf of the entire federation of American medicine."

The award was given in recognition of the 1972 increase in AMA membership over the previous year.

## First Generic Drug List Due By September

Recent information from the Associated Press indicates the first generic drug list in Kentucky may be ready for distribution to physicians and druggists by September, 1973.

N. Earl Becknell, Director of the Narcotic and Drug Control Program for the State Department of Health, said the Drug Formulary Council hopes to include about 20 drugs on the first list.

### KMA INTERIM MEETING

Since the 1973 KMA Interim Meeting took place at press time, it was not possible to include a story and pictures on the meeting in this issue of *The Journal*. Complete coverage will appear in the May issue.

## KMA Physicians Host Dinner For Ky. Congressmen

The Kentucky Medical Association hosted its 16th Annual Washington Dinner on March 13. Invited to the dinner and reception were both of Kentucky's U. S. Senators and all the U.S. Representatives from Kentucky. Administrative assistants of the Congressmen also attended.

On Monday afternoon, March 12, a briefing session was held for those in attendance at the AMA Wash-

ington Office. HEW representatives were also present and discussed several important health issues. Visits were made on an individual basis with all the members of Kentucky's Congressional delegation.

Lee C. Hess, M.D., Florence, President of KMA and Hoyt D. Gardner, M.D., Louisville, Chairman for National Affairs, KMA Legislative Committee, express their appreciation to the 27 Kentucky physicians and wives who attended the Annual Washington Dinner.

## In Memoriam

**GARLAND L. DYER, M.D.**  
Louisville  
1885-1973

Garland Lambuth Dyer, M.D., died on February 27, 1973, at the age of 87. A 1913 graduate of the University of Louisville School of Medicine, Doctor Dyer had been a general practitioner until 1969 when he retired due to illness. He was a member of the Jefferson County Medical Society, and the Kentucky and American Medical Associations.

**GUINN S. COST, M.D.**  
Hopkinsville  
1915-1973

Guinn Shaw Cost, M.D., 57, died on March 3, 1973. A surgeon, Doctor Cost graduated from Vanderbilt University School of Medicine in 1940. He was an emeritus member of the Pennyriple Medical Society, as well as the Kentucky and American Medical Associations.

**BERT C. BACH, M.D.**  
Whitesburg  
1882-1973

Bert C. Bach, M.D., died on March 3, 1973, at the age of 91. A 1910 graduate of the University of Louisville School of Medicine, Doctor Bach was a general practitioner for many years in Whitesburg. He was an emeritus member of the Kentucky Medical Association.

**EDWARD D. MUDD, M.D.**  
New Haven  
1878-1973

Edward D. Mudd, M.D., died on March 12 in Louisville, at the age of 93. He practiced medicine at New Haven for 64 years after graduating from the University of Louisville School of Medicine in 1904. A general practitioner, Doctor Mudd was an emeritus member of the Kentucky Medical Association.



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# DYAZIDE<sup>®</sup>

Trademark

Each capsule contains 50 mg. of Dyrenium<sup>®</sup> (brand of triamterene)  
and 25 mg. of hydrochlorothiazide.

## GETS THE WATER OUT IN EDEMA

## BRINGS DOWN BLOOD PRESSURE IN HYPERTENSION<sup>\*</sup>

## SPARES POTASSIUM IN BOTH

Before prescribing, see complete prescribing information in SK&F literature or *PDR*.

**\*Indications:** Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

**Contraindications:** Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

**Warnings:** Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia ( $> 5.4$  mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently — both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides

are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

**Precautions:** Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

**Adverse Reactions:** Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

**Supplied:** Bottles of 100 capsules.

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# What's in it for her?

All steroid molecules are not the same...in their activity. In prescribing birth-control pills, estrogen/progestogen activity is more important than milligrams. The woman's hormone profile often indicates the activity best for her.

ethinyl estradiol/50 mcg.

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ethynodiol diacetate/1 mg.

## Typical characteristics of the "balanced" profile

- normal menses
- well-rounded breasts
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- normal figure with normal secondary sex characteristics
- normal cytohormonal pattern

This "center spectrum" pill has had excellent user acceptance for over seven years.

## Ovulen®

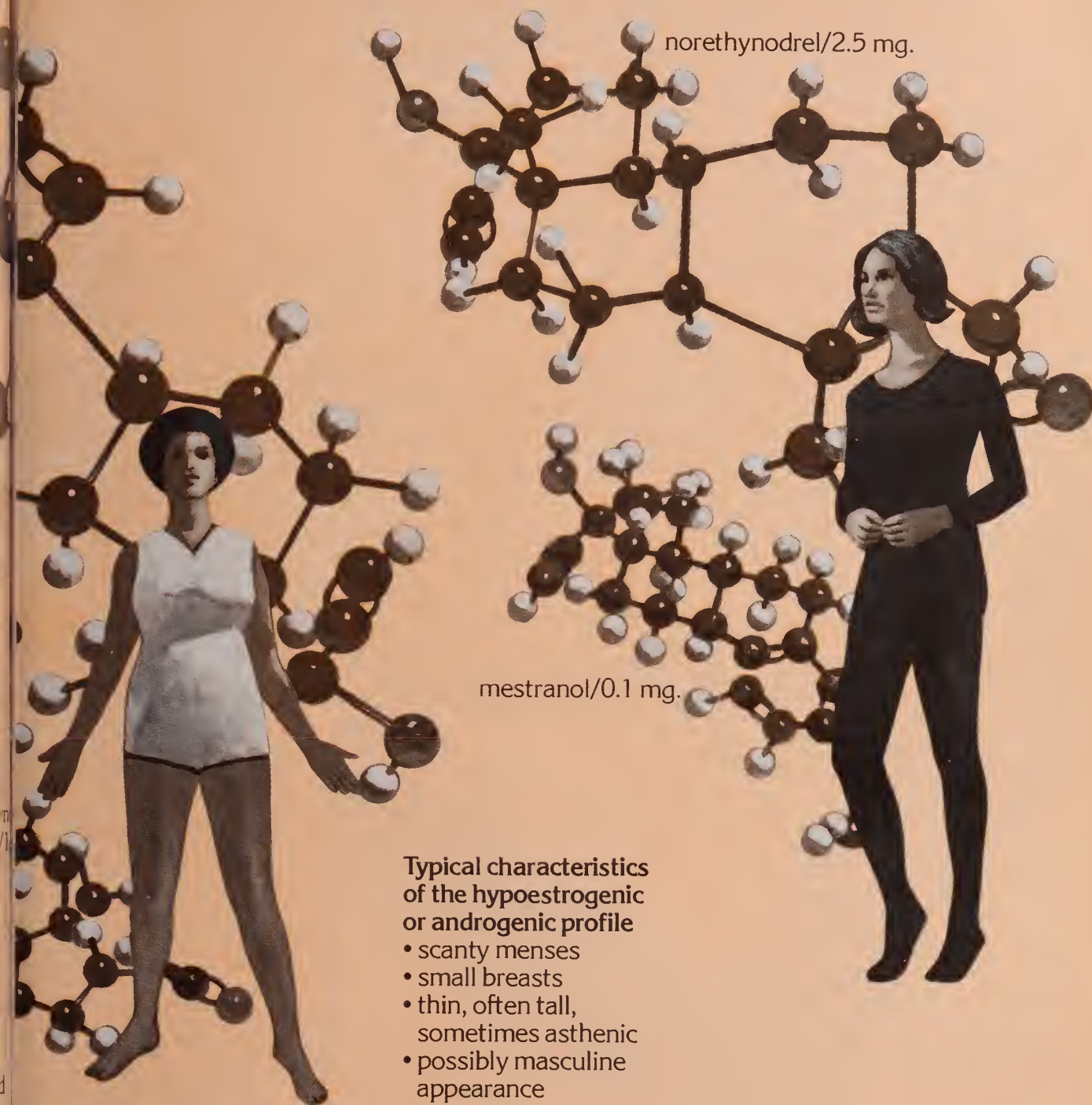
Available in 20-, 21- and 28-pill schedules  
Each white tablet contains: ethynodiol diacetate 1 mg./mestranol 0.1 mg.  
Each pink tablet in Ovulen-28® is a placebo containing no active ingredients.

for the majority of women...  
when centrally balanced  
activity is preferred

## Typical characteristics of the slightly hyper-estrogenic profile

- heavy flow
- large breasts, sometimes fibrotic; nipples well pigmented
- very feminine appearance; occasionally short
- premenstrual syndrome; fluid retention
- tendency to uterine fibroids
- high pyknotic index

This formulation, which has less estrogenic activity and a moderate progestogen dominance, may be a good beginning.



**Typical characteristics  
of the hypoestrogenic  
or androgenic profile**

- scanty menses
- small breasts
- thin, often tall,  
sometimes asthenic
- possibly masculine  
appearance
- acne, hirsutism
- low sexual motivation
- thin vaginal lining,  
tendency to vaginitis  
and dyspareunia

This pill has a relatively weak and unique\* progestogen with inherent estrogenicity. Clinically, just as in animal studies, it appears not to possess antiestrogenic and androgenic activity.

## Enovid-E<sup>®</sup>

Available in 20- and 21-pill schedules  
Each tablet contains: norethynodrel  
2.5 mg./mestranol 0.1 mg.

**a clear choice for women  
when estrogen dominance  
and no androgenic activity  
are preferred**

\*Of all the progestogens, norethynodrel most resembles the molecular structure of the estrogens. It has the weakest progestational activity of any progestogen in a combination pill.

## Demulen<sup>®</sup>

Available in 21- and 28-pill schedules  
Each white tablet contains: ethynodiol  
acetate 1 mg./ethinyl estradiol 50 mcg.  
Each pink tablet in Demulen-28<sup>®</sup> is a  
placebo containing no active ingredients.

**well suited to most women  
when low estrogenic activity  
and moderate progestogen  
dominance are preferred**



# Ovulen®

Each white tablet contains:  
ethynodiol diacetate 1 mg./mestranol 0.1 mg.

Each pink tablet in Ovulen-28® and Demulen-28® is a placebo, containing no active ingredients.

**Actions**—Ovulen and Demulen act to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen and Demulen depress the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

**Special note**—Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

**Indication**—Ovulen and Demulen are indicated for oral contraception.

**Contraindications**—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

**Warnings**—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain<sup>1-3</sup> leading to this conclusion, and one<sup>4</sup> in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll<sup>3</sup> was about sevenfold, while Sartwell and associates<sup>4</sup> in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

**Precautions**—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations pre-existing uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible

# Demulen®

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ethynodiol diacetate 1 mg./ethinyl estradiol 50 mcg.

influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen or Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen or Demulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen or Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

**Adverse reactions observed in patients receiving oral contraceptives**—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factor VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T<sup>3</sup> uptake values; metyrapone test and pregnanediol determination.

**References:** 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. 13:267-279 (May) 1967. 2. Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193-19 (April 27) 1968. 3. Vessey, M. P., and Doll, R.: Investigation of Relationship Between Use of Oral Contraceptives and Thromboembolic Disease. Further Report, Brit. Med. J. 2:651-657 (June 14) 1969. 4. Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidemiol. 90:365-380 (Nov.) 1969.

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with estrogen-dominant/  
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norethynodrel 2.5 mg./mestranol 0.1 mg.

**Actions**—Enovid-E acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Enovid-E depresses the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

**Indication**—Enovid-E is indicated for oral contraception.

The *Special Note*, *Contraindications*, *Warnings*, *Precautions* and *Adverse Reactions* listed above for Ovulen and Demulen are applicable to Enovid-E and should be observed when prescribing Enovid-E.

## Enovid-E®

brand of norethynodrel with mestranol

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# Where do you stand on this Legislation? Test Yourself:

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|--------------------------|---|
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| <input type="checkbox"/> | <input type="checkbox"/> Federal funds to expand medical schools?                                 |
| <input type="checkbox"/> | <input type="checkbox"/> Federal aid to medical students?   |
| <input type="checkbox"/> | <input type="checkbox"/> Expanded nurse training programs?  |
| <input type="checkbox"/> | <input type="checkbox"/> Expanded physician's assistant programs?                                 |
| <input type="checkbox"/> | <input type="checkbox"/> Restricted experimentation of HMO's?                                     |
| <input type="checkbox"/> | <input type="checkbox"/> More effective occupational health and safety laws?                      |
| <input type="checkbox"/> | <input type="checkbox"/> Nation-wide program of community emergency medical services?             |
| <input type="checkbox"/> | <input type="checkbox"/> <i>Voluntary</i> national health insurance?                              |
| <input type="checkbox"/> | <input type="checkbox"/> National health insurance plan federalizing all health and medical care? |

If you're for the first nine but against the tenth,

you stand where the AMA stands. We have vigorously supported virtually all recent legislation to provide more and better health care for the public. We have just as vigorously opposed any plan that would infringe on your right to practice the way you choose.

On such vital issues, the AMA is the most effective and influential spokesman that we, the profession, have. Together, we can make it even more effective in representing ourselves, and our views.

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**We can do much more together.**

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has qualified us to serve you well,  
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### **PRESCRIBING INFORMATION**

**Antiminth (pyrantel pamoate) Oral Suspension**

**Actions.** Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 µg/ml.) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

**Indications.** For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

**Warnings.** *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

**Precautions.** Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

**Adverse Reactions.** The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

**Dosage and Administration.** *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day; and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices. Because of limited data on repeated doses, no recommendations can be made.

**How Supplied.** Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles.

**ROERIG** 

A Division of Pfizer Pharmaceuticals  
New York, New York 10017



# Clean Sweep



## with a single dose of Antiminth

(pyrantel pamoate) ORAL SUSPENSION

Highly effective against  
pinworm and roundworm

Non-staining to teeth  
or oral mucosa on ingestion, to  
stools, clothing, linen

Simple dosage with a  
single-dose regimen: 1 cc. per  
10-lb. body weight (1 tsp./50 lb.;  
maximum dose, 4 tsp.)

Well-tolerated, based on  
clinical studies\*

Pleasant-tasting, easy-to-  
take, caramel-flavored oral  
suspension

Economical, because one  
prescription can treat the entire  
family

**ROERIG** 

A division of Pfizer Pharmaceuticals  
New York, New York 10017

# ANTIMINTH<sup>®</sup>

(pyrantel pamoate)

equivalent to 50 mg. pyrantel/ml.

ORAL SUSPENSION

While Antiminth is highly effective against pinworms and roundworms, the illustration is not meant to imply 100% efficacy.  
\*Data on file at Roerig. Please see prescribing information on facing page.

# What's on your patient's face...

may be more important than  
his chief complaint



The lesions on his face may be solar/actinic — so-called “senile” keratoses...and they may be premalignant.

## Solar, actinic or senile keratoses

These lesions may be called by several names, but they usually can be identified by the following characteristics: the typical lesion is flat or slightly elevated, of a brownish or reddish color, papular, dry, rough, adherent, and sharply defined. They commonly occur as multiple lesions, chiefly on the exposed portions of the skin.



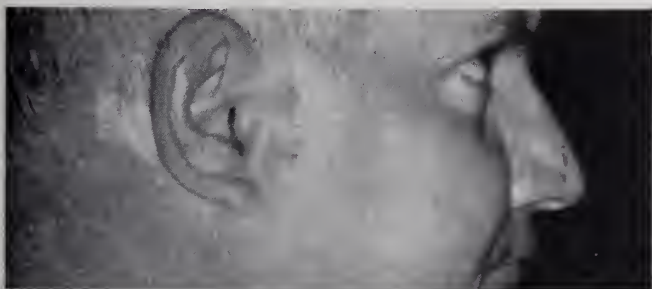
Patient P.T.\* seen on 3/29/67 shows typical lesions of moderately severe keratoses. Note residual scarring on ridge of nose from previous cryosurgical and electro-surgical procedures.

## Sequence of therapy/ selectivity of response

After several days of therapy with Efudex® (fluorouracil), erythema may begin to appear in the area of the lesions; the reaction usually reaches its height of unsightliness and discomfort within two weeks, declining after discontinuation of therapy. This reaction occurs in affected areas. Since the response is so predictable, lesions that do not respond should be biopsied.

## Acceptable results

Treatment with Efudex provides highly favorable cosmetic results. Incidence of scarring is low. This is particularly important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.



Patient P.T.\* seen on 6/12/67, seven weeks after discontinuation of 5%-FU cream. Reaction has subsided. Residual scarring not seen except for that due to prior surgery. Inflammation has cleared and face is clear of keratotic lesions.

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Multiple actinic or solar keratoses.

**Contraindications:** Patients with known hypersensitivity to any of its components.

**Warnings:** If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

**Precautions:** If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

**Adverse Reactions:** Local — pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported — insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

**Dosage and Administration:** Apply sufficient quantity to cover lesion twice daily with non-metal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

**How Supplied:** Solution, 10-ml drop dispensers — containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes — containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

This patient's lesions  
were resolved with

**Efudex<sup>®</sup>**  
**(fluorouracil)**  
5% cream/solution  
...a Roche exclusive



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110

\*Data on file, Hoffmann-La Roche Inc., Nutley, N.J.



# These are Candeptin:

The highly effective candicidin  
for all your vaginal moniliasis patients.

First came CANDEPTIN (candicidin) Tablets for intravaginal use. Then CANDEPTIN Ointment to treat labial involvement and for intravaginal use. Now unique **CANDEPTIN VAGELETTES**—candicidin ointment in soft gelatin capsules—extend the range of CANDEPTIN therapy to even your pregnant and virginal patients (you merely cut off the narrow tip and extrude the contents through the intact hymen).

#### Clinical proof of potency

CANDEPTIN brings your patients prompt relief of itching, burning and discharge—usually within 72 hours.<sup>1</sup> A single, 14-day course of treatment is usually all that's needed for a complete cure.<sup>2,3,4</sup>

Significantly more potent *in vitro* than

nystatin.<sup>5</sup> CANDEPTIN Tablets and Ointment have shown clinical cure rates of 90% and higher in both pregnant and non-pregnant patients.<sup>1,4,6</sup> And in recent studies of **CANDEPTIN VAGELETTES** Vaginal Capsules involving both pregnant and non-pregnant patients, a 100% culture-confirmed cure rate was achieved with a single 14-day course of therapy.<sup>2,3</sup>

Only CANDEPTIN gives you a dosage form for every therapeutic need, plus *eight years'* clinical proof of potency. Consider CANDEPTIN for your next vaginal moniliasis patient.

## **CANDEPTIN<sup>®</sup>** (candicidin)



**Description:** CANDEPTIN (candicidin)

Vaginal Ointment contains a dispersion of candicidin powder equivalent to 0.6 mg. per gm. or 0.06% Candicidin activity in U.S.P. petrolatum. 3 mg. of Candicidin is contained in 5 gm. of ointment or one applicatorful. CANDEPTIN Vaginal Tablets contain Candicidin powder equivalent to 3 mg. (0.3%) Candicidin activity dispersed in starch, lactose and magnesium stearate. CANDEPTIN VAGELETES Vaginal Capsules contain 3 mg. of Candicidin activity dispersed in 5 gm. U.S.P. petrolatum.

**Action:** CANDEPTIN Vaginal Ointment, Vaginal Tablets, and VAGELETES Vaginal Capsules possess anti-monomial activity.

**Indications:** Vaginitis due to *Candida albicans* and other *Candida* species.

**Contraindications:** Contraindicated for patients known to be sensitive to any of its components. During pregnancy manual Tablet or VAGELETES Capsule insertion may be preferred since the use of the ointment applicator or tablet inserter may be contraindicated.

**Caution:** During treatment it is recommended that the patient refrain from sexual intercourse or the husband wear a condom to avoid re-infection.

**Adverse Reaction:** Clinical reports of sensitization or temporary irritation with CANDEPTIN Vaginal Ointment, Vaginal Tablets or VAGELETES Vaginal Capsules have been extremely rare.

**Dosage:** One vaginal applicatorful of CANDEPTIN Ointment or one Vaginal Tablet or one VAGELETES Vaginal Capsule is inserted high in the vagina twice a day, in the morning and at bedtime, for 14 days. Treatment may be repeated if symptoms persist or reappear.

**Available Dosage Forms:** CANDEPTIN Vaginal Ointment is supplied in 75 gm. tubes with applicator (14-day regimen requires 2 tubes). CANDEPTIN Vaginal Tablets are packaged in boxes of 28, in foil with inserter—enough for a full course of treatment. CANDEPTIN VAGELETES Vaginal Capsules are packaged in boxes of 14 (14-day regimen requires 2 boxes.)

Store under refrigeration to insure full potency.

Federal law prohibits dispensing without prescription.

**References:** 1. Olsen, J.R.: *Journal-Lancet* 85:287 (July) 1965. 2. Giorlando, S.W.: *Ob/Gyn Dig.* 13:32 (Sept.) 1971. 3. Decker, A.: Case Reports on File, Medical Department, Julius Schmid. 4. Giorlando, S.W., Torres, J.F., and Muscillo, G.: *Am. J. Obst. & Gynec.* 90:370 (Oct. 1) 1964. 5. Lechevalier, H.: *Antibiotics Annual* 1959-1960, New York, Antibiotica Inc., 1960, pp. 614-618. 6. Friedel, H.J.: *Maryland M.J.*, 15:36 (Feb.) 1966.



Julius Schmid Pharmaceuticals  
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New York, New York 10019

## CANDEPTIN® (candicidin)

Vaginal Tablets

Vaginal Ointment

and VAGELETES™  
Vaginal Capsules

## Intestinal Malabsorption

(Continued from page 249)

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7. Trier, J. S.: Diagnostic Value of Peroral Biopsy of the Proximal Small Intestine. *N Engl J Med* 285:1470, 1971.

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# POST-GRADUATE SYMPOSIUM ON RHEUMATIC DISEASES



Auditorium, Health Science Center **APRIL 19, 1973** Louisville Medical Center  
Preston & Walnut Streets

SPONSORED BY THE UNIVERSITY OF LOUISVILLE SCHOOL OF MEDICINE  
AND THE KENTUCKY ARTHRITIS FOUNDATION

## CURRENT TOPICS IN RHEUMATOLOGY

This symposium will present selected topics of current interest to update the physician in new methods and advances in rheumatology. Highlights will include the mechanism of inflammation in arthritis, newer useful laboratory procedures, radioisotope techniques for joint examination, developments in the surgery of rheumatoid arthritis and newer knowledge in scleroderma, polymyalgia rheumatica and other nonarticular rheumatic disorders. There will be panel discussions with audience participation.

### PROGRAM DIRECTOR: DAVID H. NEUSTADT, M.D.

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CHARLES M. PLOTZ, M.D.  
Brooklyn, New York

NAOMI F. ROTHFIELD, M.D.  
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A. B. SWANSON, M.D.  
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New Orleans, Louisiana

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New York, New York

*New Findings in Scleroderma:  
Clinical, Pathologic and  
Epidemiologic*

*Polymyalgia Rheumatica and  
Other Forms of Nonarticular  
Rheumatism*

*Laboratory Procedures in  
Rheumatic Diseases*

*Finger Joint Replacement  
Surgery in Rheumatoid Arthritis*

*Radioisotopes in Rheumatic  
Diseases: Clinical Application*

*Mechanism of Inflammation in  
Arthritis*

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FOR FURTHER INFORMATION CONTACT KENTUCKY ARTHRITIS FOUNDATION, 1381 BARDSTOWN RD., LOUISVILLE, KY. 40204





## acute arthritic inflammation...heat that freezes

In acute rheumatoid arthritis consider Tandearil. The anti-inflammatory action of Tandearil quickly helps reduce heat, pain, swelling, and stiffness. Results are usually seen in 3 or 4 days. Try it for a week when the symptoms defy aspirin control.

Remember that Tandearil is not a simple analgesic. It should not be used on patients responding to routine therapy. Before using, please read the prescribing information. It's summarized below.

## Tandearil® helps take the heat off oxyphenbutazone NF Geigy

Tablets of 100 mg.

**Important Note:** This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions (symptoms of blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

**Indications:** Acute gouty arthritis, rheumatoid arthritis, rheumatoid spondylitis.

**Contraindications:** Children 14 years or less; senile patients; history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia; history or presence of drug allergy; blood dyscrasias; renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema; stomatitis and salivary gland enlargement due to the drug; polymyalgia rheumatica and temporal arteritis; patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

**Warnings:** Age, weight, dosage, duration of therapy, existence of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against po-

tential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

**Precautions:** The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

**Adverse Reactions:** This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia,

gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement. (B)98-146-800-F (10/71)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals  
Division of CIBA-GEIGY Corporation  
Ardsley, New York 10502

# more than sleep

YOUR CHOICE OF SLEEP MEDICATION  
IS WISELY BASED ON MORE THAN  
SLEEP-INDUCING POTENTIAL

## Sleep with relative safety

Chronic tolerance studies have confirmed the relative safety of Dalmane (flurazepam HCl); no depression of cardiac or respiratory function was noted in patients administered recommended or higher doses for as long as 90 consecutive nights.

In most instances when adverse reactions were reported, they were mild, infrequent and seldom required discontinuance of therapy. Morning "hang-over" with Dalmane has been relatively infrequent. Dizziness, drowsiness, lightheadedness and the like have been the side effects noted most frequently, particularly in the elderly and debilitated. (An initial dose of Dalmane 15 mg should be prescribed for these patients.)

## Sleep for 7 to 8 hours without need to repeat dosage during the night

No sleep medication has been as rigorously evaluated in the sleep research laboratory as Dalmane. Insomnia patients given one 30-mg capsule of Dalmane (flurazepam HCl) at bedtime, on average: fell asleep within 17 minutes, had fewer nighttime awakenings, spent less time awake after sleep onset, and slept for 7 to 8 hours with no need to repeat dosage during the night.

## Sleep with consistency— no waning of therapeutic effectiveness

Over multiple nights of therapy, no waning of drug effectiveness was noted. There was consequently no need to increase dosage during the study periods. It stands to reason that the fewer repeat or incremental doses needed to sustain sleep, the lower the total cost of the sleep medication. Consistent effectiveness is the measure of Dalmane (flurazepam HCl) economy.

When your evaluation of insomnia indicates the need for a sleep medication, consider Dalmane—a single entity nonnarcotic, nonbarbiturate agent proved effective and relatively safe for relief of insomnia.

# DALMANE<sup>®</sup>

(flurazepam HCl)

## When restful sleep is indicated

One 30-mg capsule *h.s.*—usual adult dosage.

One 15-mg capsule *h.s.*—initial dosage  
for elderly or debilitated patients.

**ROCHE**

ROCHE LABORATORIES  
Division of Hoffmann-La Roche Inc.  
Nutley, New Jersey 07110

Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

**Indications:** Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or

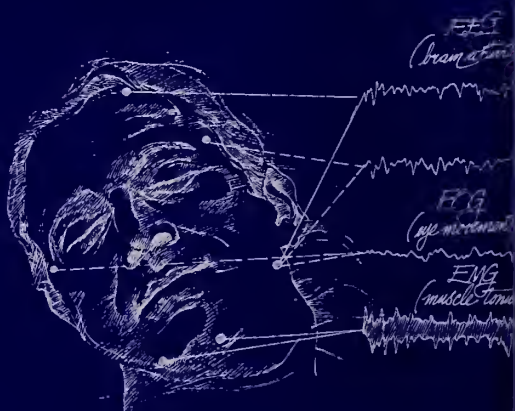
recommended.

**Contraindications:** Known hypersensitivity to flurazepam HCl.

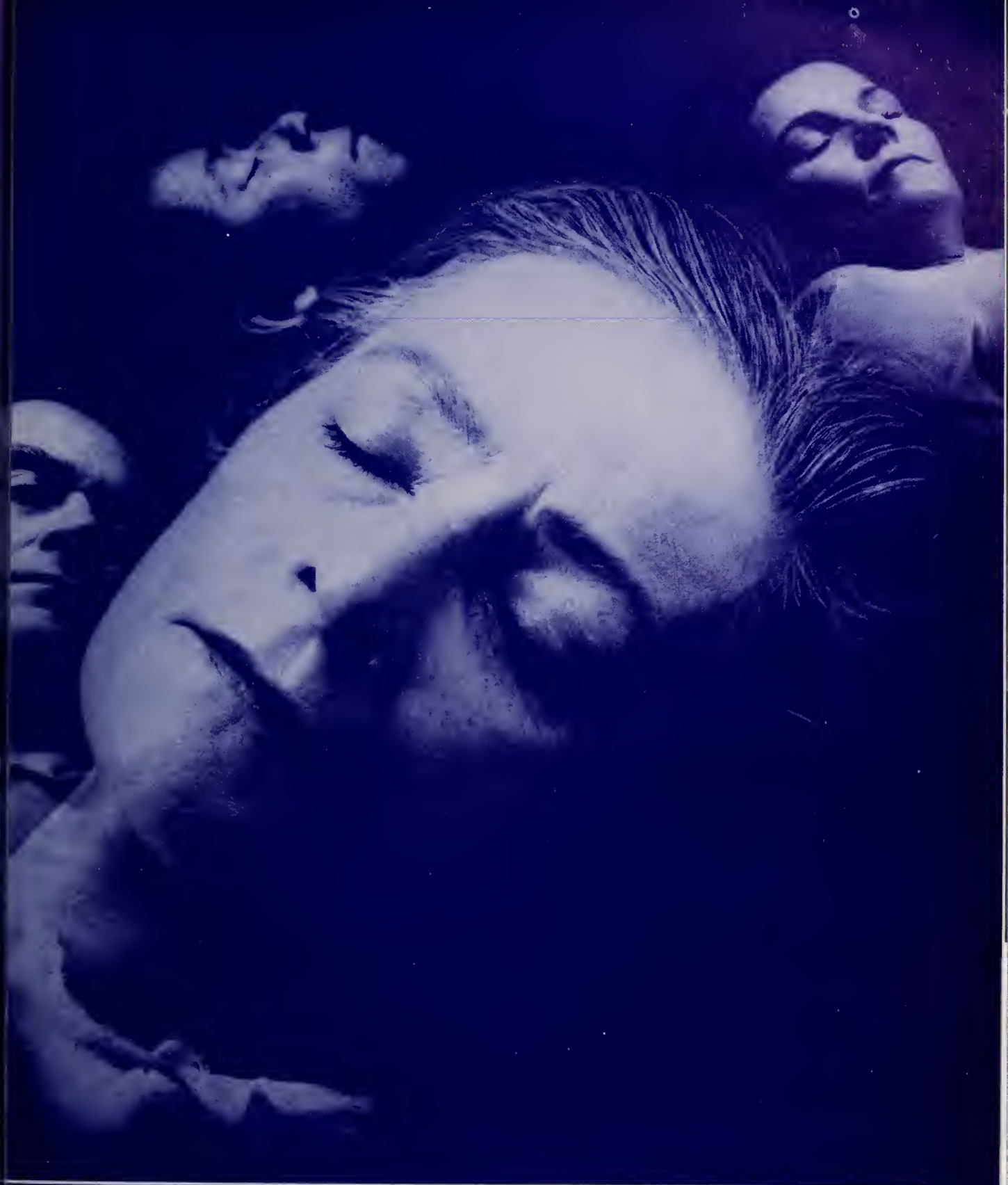
**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years

of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

**Precautions:** In elderly and debilitated initial dosage should be limited to 15 mg to preclude oversedation, dizziness and ataxia. If combined with other drug having hypnotic or CNS-depressant effects, consider potential additive effect. Employ usual precautions in patients who are severely depressed, or with







depression or suicidal tendencies. Complete blood counts and liver and kidney tests are advised during prolonged therapy. Observe usual precautions in presence of impaired renal or hepatic function.

**Side Reactions:** Dizziness, drowsiness, lightheadedness, staggering, ataxia, falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and possibly indicative of drug intolerance or overdosage, have been reported.

Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech,

confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase.

Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.

**Dosage:** Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients.

*Elderly or debilitated patients:* 15 mg initially until response is determined.

**Supplied:** Capsules containing 15 mg or 30 mg flurazepam HCl.

# He won't resist feeling better with **Mylanta<sup>®</sup>**

Because the taste is good.

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- ☐ also relieves fullness and bloating
- ☐ non-constipating



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*"The history of science, and in particular the history of medicine... is... the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."*

*—George Sarton, from "The History of Medicine Versus the History of Art"*

**Are there significant  
differences in bioavailability  
and clinical predictability  
among drug products?**

**Opinion**

Results of a questionnaire to  
7,000 physicians:

**44.6%**  
Agree there is a significant  
difference

**24.9%**  
Believe there is no difference

**30.5%**  
Had no opinion

## Are there significant differences in bioavailability and clinical predictability among drug products?

### Teacher of Medicine

Alfred Gilman, Ph.D.  
Wm. S. Lasdon  
Professor & Chairman  
Department of  
Pharmacology  
Albert Einstein  
College of Medicine of  
Yeshiva University



I think that there can be a very great distinction between generic drugs and brand name drugs. And that applies to products of original research that have outlived their patent protection as well as to drugs that have long been in the public domain. Let me explain why.

#### The Importance of the Manufacturing Environment

In terms of formulation, quality control, and the ability to reproduce an essentially identical product, batch after batch, I doubt that many firms are properly equipped to put out a product that is as carefully controlled as the product marketed by a pharmaceutical company with sophisticated research and high quality manufacturing facilities. For example, when a company comes out with its own preparation of a drug that has just lost its patent protection, there is no assurance that the drug it produces will be a therapeutic equivalent. The raw material could be identical and yet bioavailability might vary from complete unavailability to that which is equivalent to the original.

#### It Isn't Enough to Meet USP and NF Standards

Meeting USP and NF standards is not enough to guarantee therapeutic equivalence. In certain instances, stricter standards must be applied. Right now, the New York Heart Association has a committee that is studying the problem of digoxin equivalent

lency. I am certain that they are going to recommend a bioavailability assay of a particular digoxin. Unless this is done, they will not recommend it for purchase or use in New York City hospitals. It represents too much of a hazard. They have gone so far as to recommend a batch-by-batch certification of bioavailability even though the company has been reproducing and marketing a digoxin product through the years.

#### The Problem of Controlling Bioavailability of Generics

The FDA does not have the manpower to inspect the quality control capabilities of hundreds of houses specializing in generic products. And I don't think that the average pharmacist is knowledgeable or aware of the quality and bioavailability of the infinite numbers of generic preparations. A recommendation has been made that every time a generic house (or for that matter a large pharmaceutical company) markets an already existing drug for the first time, a modified new drug application should be submitted. The manufacturer would have to show that his compound is the therapeutic equivalent of the standard compound in use, assuming that the standard compound is one that has been available for an extended period—say 15 years. This would be one indication that the control of bioavailability is beginning to get the attention that it deserves.

#### Clinical Predictability: More Important Than Price

Although the question of price has been greatly exaggerated, it is true that patients can on occasion save money on generic drugs. But you are not going to dare attempt to save money if it jeopardizes patient's health. Let's turn to the example that has become very prominent in recent years, that of cardiac glycosides. These are probably the most toxic drugs we use with respect to the small difference between a maximally effective dose and a toxic dose. When you are dealing with drugs of this type, the first concern must be clinical predictability. At the risk of variations in bioavailability, it would be sheer folly to try to save the patient what might amount to maybe \$10 or \$20 a year. The physician cannot neglect his patient unless he is sure that the drug he is prescribing has the same positive effect each time the prescription is renewed. This is especially significant when the patient is on the product, not for months but for the rest of his life.

## Maker of Medicine

C. J. Cavallito, Ph.D.  
Executive Vice President  
Ayerst Laboratories



minimize nonequivalence of drug components produced by different manufacturers. Arguments relate largely to the extent of product inequivalences. Experience over the past six years has uncovered a greater incidence of nonequivalence of products prepared by different manufacturers from generically equivalent substances than many had previously surmised.

### Newer Bioavailability Studies Reveal Differences

Bioavailability may be defined as a measure of the rate and amount of absorption of a drug substance from its administered dosage form. For several years pharmaceutical scientists have proposed that bioavailability data on presumably equivalent dosage forms provide the best measure of product equivalence—short of adequate clinical trial. In their continued search for shortcuts to the evaluation of product equivalence, medical and pharmaceutical scientists have increasingly relied upon bioavailability characteristics as reflected by blood levels of a drug after its administration to human subjects.

Leading manufacturers now conduct comparative bioavailability studies on their own product dosage forms after production process changes that would have been considered inconsequential a few years ago. This isn't surprising, since there are so many possible differences in production operations that the opportunities for inequiva-

lent generic and brand name products are numerous—even when the production process begins with identical chemical substances. Moreover, reputable manufacturers are striving to improve *in vitro* control measures, such as dissolution characteristics, which are being related more meaningfully to bioavailability reference data.

As a result of advances in scientific instrumentation and analytical methodology which permit measurements of small quantities of drug substances in the body, our abilities to detect differences in bioavailability and possible therapeutic nonequivalence have appreciably improved.

### Product Selection Based on Patient Response

Improved specifications and standards can better assure the equivalence of drug substances. Manufacturers, compendia and regulatory agencies can all play a part. However, it is the drug product, not the drug substance, that the physician, pharmacist, nurse and patient-customer utilize. How can these indi-

viduals make or influence specific product selections to minimize variations in therapeutic equivalence of multisource drugs? Patients' responses to a drug product provide a basis of experience to aid the physician in his selection of a particular product. The nurse and pharmacist can also help detect patient responses, but ultimate responsibility must remain with the physician.

### Reputation of Manufacturer as Basis for Product Selection

The physician, to assure that his patients receive quality health care, must rely upon the capabilities of the reputable pharmaceutical manufacturer who is equipped to develop, prepare and control a quality product of uniform, reliable therapeutic performance. Substitution with purportedly equivalent generic products that are only superficially evaluated by an imitator manufacturer can place the health of the patient secondary to factors of price or convenience for the provider.

## Opinion & Dialogue

What is your opinion, doctor?  
We would welcome your comments.



The Pharmaceutical Manufacturers Association  
1155 Fifteenth Street, N.W., Washington, D.C. 20005

Although equivalence of different preparations of a drug substance may be deduced by certain physical, chemical or biological characteristics, identity is not always assured even though these characteristics may be described in compendia such as the USP, NF or defined by other specific source standards. Moreover, even with equivalent drug substances, similar pharmaceutical products can be produced by different manufacturers such that these products are biologically or therapeutically equivalent.


### A Growing Awareness of Potential for Nonequivalence

As experience increases with drug substances derived from different sources and under different conditions, it should be possible to establish specifications in sufficient detail to minimize the potential for their nonequivalence. However, there is general agreement that product therapeutic equivalence would still not be assured even if one could



# Integument!

Our skin—the human integument—covers us, defines us, protects us. But skin is subject to cuts, burns, abrasions. And infections. Neosporin Ointment fights infection by providing broad antibacterial action against susceptible skin invaders. It contains antibiotics that are rarely used systemically, reducing the risk of sensitization.



**INDICATIONS:** Therapeutically, used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in:

- infected burns, skin grafts, surgical incisions, otitis externa
- primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia)
- secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis)
- traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

**CONTRAINDICATIONS:** Not for use in the external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

**PRECAUTION:** As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Complete literature available on request from Professional Services Dept. PML.

## NEOSPORIN<sup>®</sup> Ointment

(POLYMYXIN B-BACITRACIN-NEOMYCIN)

Each gram contains: Aerosporin<sup>®</sup> brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg. neomycin base); special white petrolatum q.s. In tubes of 1 oz. and ½ oz. and ¼ oz. (approx.) foil packets



Wellcome

Burroughs Wellcome Co.  
Research Triangle Park  
North Carolina 27709

# Application

## FOR SPACE IN THE SCIENTIFIC EXHIBIT SECTION

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Kentucky Medical Association

Ramada Inn-Bluegrass Center

Louisville, Kentucky

September 18, 19, 20

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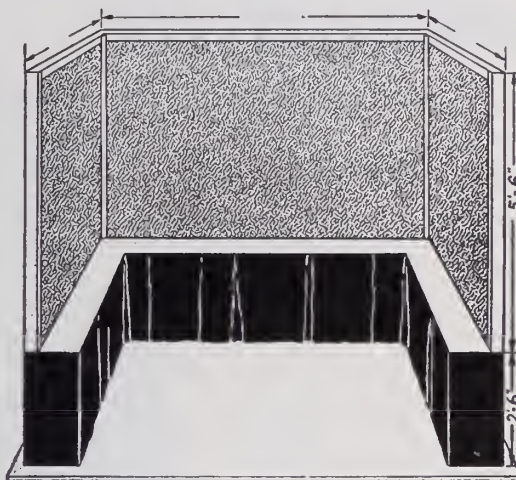
Kentucky Medical Association

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before July 1, 1973.

The Kentucky Medical Association welcomes  
and supports scientific exhibits as a facet of  
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**Transportation and erection costs are the responsibility of the exhibitor.**

**View Boxes, furniture, decorations, etc., may be rented, if desired, by applying directly to the Joseph T. Griffin Company, 704 West Main Street, Louisville, Kentucky 40202.**



# Pinworm therapy is often a family affair



**Contraindications:** History of hypersensitivity to thiabendazole.

**Warnings:** If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.

**Precautions:** Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction,

patients should be carefully monitored.

**Adverse Reactions:** Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of live *Ascaris* in the mouth and nose. Hypersensitivity reactions



# A New Dosage Form:

## Chewable Tablets 500 mg Mintezol® THIABENDAZOLE | MSD)



so easy to take  
everyone in the family  
can keep to the  
regimen you prescribe

include: fever, facial flush, chills, conjunctival injection, angioedema, anaphylaxis, skin rashes, erythema multiforme (including Stevens-Johnson syndrome), and lymphadenopathy.  
**Supplied:** Chewable tablets, containing 500 mg thiabendazole, in boxes of 36, strip packaged, individually foil wrapped; suspension, containing 500 mg thiabendazole per 5 cc, in bottles of 120 cc.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

### INDICATION | DOSAGE SCHEDULE

MINTEZOL® (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infections. Dosages are weight related. For your convenience, the information in the weight-dose chart below is included in the full prescribing information and in the 1973 edition of PDR.

*The recommended maximum daily dose of MINTEZOL is 3 g (6 tablets).*

MINTEZOL should be given after meals if possible. Dietary restriction, complementary medications, and cleansing enemas are not needed.

The usual dosage schedule for all conditions is two doses per day. The size of the dose is determined by the patient's weight.

Weight-dose chart:

WEIGHT (lb)	EACH DOSE (g)	TABLETS
25	0.25	½
50	0.5	1
75	0.75	1½
100	1.0	2
125	1.25	2½
150 & over	1.5	3

The regimen for each indication follows:

INDICATION	REGIMEN	COMMENTS
Pinworm disease	Two doses per day for 1 day. Repeat in 7 days.  This regimen is designed to reduce the risk of reinfection.	If this is not practical, give 2 doses per day for 2 successive days.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses per day for 2 successive days.	A single dose of 20 mg/lb or 50 mg/kg may be employed as an alternative schedule, but a higher incidence of side effects should be expected.
Creeping eruption	Two doses per day for 2 successive days.	If active lesions are still present 2 days after completion of therapy, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses per day for 2 to 4 successive days according to the response of the patient.	The optimal dosage for the treatment of trichinosis has not been established.

\*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.

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...to SOUTHERN OPTICAL

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Southern  
 Optical

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Maybe the patient's self-diagnosis is right. He could have hay fever. But that bright red nasal mucosa, along with the thick discharge and excoriation around the nares, strongly suggests that the main problem is a cold. Hay fever or another form of allergic rhinitis may or may not be an underlying factor.

If a complete history and examination rule out allergic rhinitis, the long-term outlook will be a lot more favorable than his own "diagnosis" would have indicated.

But right now, whether he's got allergic rhinitis or a cold, he's suffering from the same irritat-

ing symptoms of drip, congestion and stuffiness. Try DIMETAPP EXTENTABS®. They're formulated to relieve these symptoms without much chance of causing drowsiness or overstimulation. Your patients will appreciate the 24-hour relief they can get from just one tablet every 12 hours.

# Cold or



# Allergy?

**Whether it's a cold or an allergy, Dimetapp Extentabs® effectively relieve stuffiness, drip and congestion.**

**INDICATIONS:** Dimetapp Extentabs are indicated for symptomatic relief of allergic manifestations of upper respiratory illnesses, such as the common cold, seasonal allergies, sinusitis, rhinitis, conjunctivitis and otitis. In these cases it quickly reduces inflammatory edema, nasal congestion and excessive upper respiratory secretions, thereby affording relief from nasal stuffiness and postnasal drip.

**CONTRAINDICATIONS:** Hypersensitivity to antihistamines of the same chemical class. Dimetapp Extentabs are contraindicated during pregnancy and in children under 12 years of age. Because of its drying and thickening effect on the lower respiratory secretions, Dimetapp is not recommended in the treatment of bronchial asthma. Also, Dimetapp Extentabs are contraindicated in concurrent MAO inhibitor therapy.

**WARNINGS:** *Use in children:* In infants

and children particularly, antihistamines in overdosage may produce convulsions and death.

**PRECAUTIONS:** Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness, such as driving an automobile, operating machinery, etc. Patients receiving antihistamines should be warned against possible additive effects with CNS depressants

such as alcohol, hypnotics, sedatives, tranquilizers, etc.

**ADVERSE REACTIONS:** Adverse reactions to Dimetapp Extentabs may include hypersensitivity reactions, such as rash, urticaria, leukopenia, agranulocytosis and thrombocytopenia; drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, increased frequency and dysrhythmia, palpitation, hypotension, hypertension, headache, faintness, dizziness, tinnitus, and other visual disturbances, mydriasis, CNS depression and (less often) stimulant effect, anorexia, nausea, vomiting, diarrhea, constipation, and epigastric distress.

**HOW SUPPLIED:** Light blue, extentabs in bottles of 100 and 500.

## Dimetapp Extentabs®

Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.

**A-H-ROBINS**

A. H. Robins Company, Richmond, Va. 23060

# when pain goes on... and on... and on—



For the patient with a terminal illness, PAIN past, present, and future can dominate his thoughts until it becomes almost an obsession. The more he is aware of the pain he is now experiencing, the more difficult it is to erase his memory of yesterday's pain, and to allay his fearful anticipation of tomorrow's pain.


Surely the last thing this patient needs is an analgesic containing caffeine to stimulate the senses and heighten pain awareness. A far more logical choice is Phenaphen with Codeine. The sensible formula provides  $\frac{1}{4}$  grain of phenobarbital to take the nervous "edge" off, so the rest of the formula can help control the pain more effectively. Don't you agree, Doctor, that psychic distress is an important factor in most of your terminal and long-term convalescent patients?

the analgesic formula that calms instead of caffeinates

## Phenaphen<sup>®</sup> with Codeine


Phenaphen with Codeine No. 2, 3, or 4 contains: Phenobarbital ( $\frac{1}{4}$  gr.), 16.2 mg. (warning: may be habit forming); Aspirin ( $2\frac{1}{2}$  gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Codeine phosphate,  $\frac{1}{4}$  gr. (No. 2),  $\frac{1}{2}$  gr. (No. 3) or 1 gr. (No. 4) (warning: may be habit forming).

**Indications:** Provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products, excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.

 Phenaphen with Codeine is now classified in Schedule III, Controlled Substances Act of 1970. Available on written or oral prescription and may be refilled 5 times within 6 months, unless restricted by state law.

A. H. Robins Company, Richmond, Va. **A·H·ROBINS**





# when manhood ebbs...

due to testicular deficiency

## Halotestin® 5 mg tablets

fluoxymesterone, Upjohn

### oral hormone replacement with parenteral-like potency

**Halotestin® Tablets—2, 5 and 10 mg**  
(fluoxymesterone Tablets, U.S.P., Upjohn)

**Indications in the male:** Primary indication in the male is replacement therapy. Prevents the development of atrophic changes in the accessory male sex organs following castration:

**1.** Primary eunuchoidism and eunuchism. **2.** Male climacteric symptoms when these are secondary to androgen deficiency. **3.** Those symptoms of panhypopituitarism related to hypogonadism. **4.** Impotence due to androgen deficiency. **5.** Delayed puberty, provided it has been definitely established as such, and it is not just a familial trait.

**In the female:** **1.** Prevention of postpartum breast manifestations of pain and engorgement. **2.** Palliation of androgen-responsive, advanced, inoperable female breast cancer in women who are more than 1, but less than 5 years post-menopausal or

who have been proven to have a hormone-dependent tumor, as shown by previous beneficial response to castration.

**Contraindications:** Carcinoma of the male breast. Carcinoma, known or suspected, of the prostate. Cardiac, hepatic or renal decompensation. Hypercalcemia. Liver function impairment. Prepubertal males. Pregnancy.

**Warnings:** Hypercalcemia may occur in immobilized patients, and in patients with breast cancer. In patients with cancer this may indicate progression of bony metastasis. If this occurs the drug should be discontinued. Watch female patients closely for signs of virilization. Some effects may not be reversible. Discontinue if cholestatic hepatitis with jaundice appears or liver tests become abnormal.

**Precautions:** Patients with cardiac, renal or hepatic derangement may retain sodium and water

thus forming edema. Priapism or excessive sexual stimulation, oligospermia, reduced ejaculatory volume, hypersensitivity and gynecomastia may occur. When any of these effects appear the androgen should be stopped.

**Adverse Reactions:** Acne. Decreased ejaculatory volume. Gynecomastia. Edema. Hypersensitivity, including skin manifestations and anaphylactoid reactions. Priapism. Hypercalcemia (especially in immobile patients and those with metastatic breast carcinoma). Virilization in females. Cholestatic jaundice.

#### How Supplied

**2 mg**—bottles of 100 scored tablets.

**5 mg**—bottles of 50 scored tablets.

**10 mg**—bottles of 50 scored tablets.

For additional product information, see your Upjohn representative or consult the package circular.

MED 8-6-S (MAH)

# How strong must a tranquilizer be for severe anxiety?

## As strong as Librium® 25 mg (chlordiazepoxide HCl)



The achievement of desired therapeutic results is often a function of the dosage strength as well as the drug's intrinsic action. Thus, when anxiety is severe, the 25-mg strength of Librium frequently provides the necessary antianxiety action with a minimum of unwanted adverse reactions. Librium 25 mg is a convenient dosage form for the relief of severe, incapacitating anxiety, specifically formulated to supplement your counsel and reassurance.

### Benefits-to-risks ratio permits higher dosage

For over 13 years, Librium has been recognized for its excellent benefits-to-risks ratio, an asset in the higher dosage ranges as in more common clinical applications. Thus, the frequency of dosage with Librium 25 mg can be flexibly adjusted to the needs and response of the individual patient, up to 100 mg daily if required. Total daily dosage for the elderly and debilitated should not exceed 20 mg. When severe anxiety has been reduced, Librium dosage should be correspondingly reduced or discontinued entirely.



basic support  
in severe anxiety  
**Librium® 25 mg**  
(chlordiazepoxide HCl)  
1 capsule t.i.d./q.i.d.



Roche Laboratories  
Division of Hoffmann-La Roche Inc  
Nutley, N.J. 07110

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Relief of anxiety and tension occurring alone or accompanying various disease states.

**Contraindications:** Patients with known hypersensitivity to the drug.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

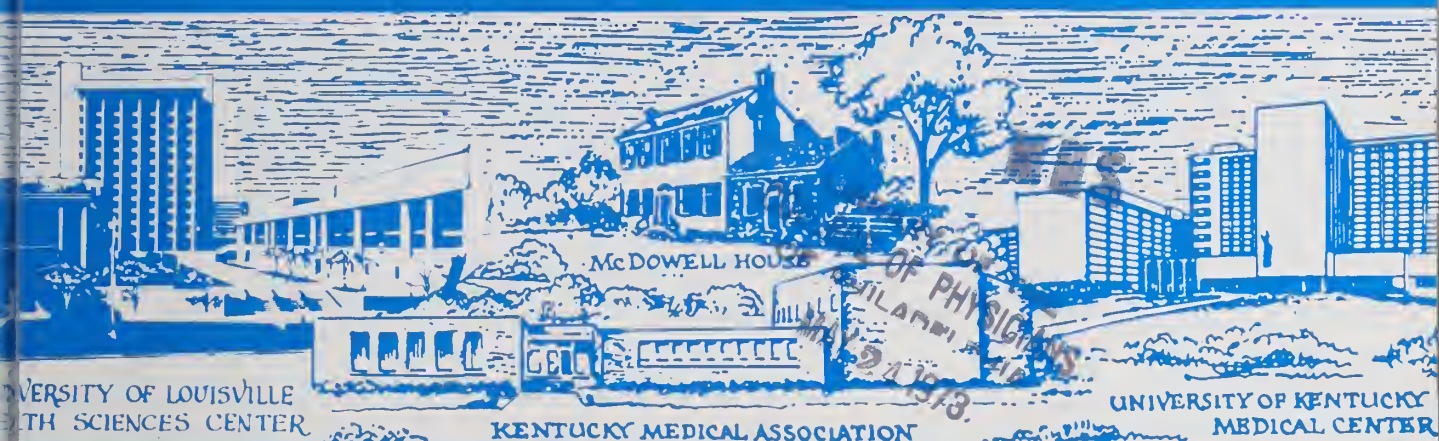
**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

**Adverse Reactions:** Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

**Supplied:** Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.



*The Journal of The*  
**KENTUCKY**  
*Medical Association*



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KMA 1973 Annual Meeting  
September 18-20  
Bluegrass Convention Center  
Ramada Inn  
Louisville, Kentucky



Everybody experiences psychic tension.



Most people can handle this tension.



Some people develop excessive psychic tension and need your counseling,



and a few may need counseling  
*and* the psychotropic action of Valium® (diazepam).



Before deciding to make Valium (diazepam) part of your treatment plan, check on whether or not the patient is presently taking drugs and, if so, what his response has been. Along with the medical and social history, this information can help you determine initial dosage, the possibility of side effects and the ultimate prospects of success or failure.

While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

**Dosage:** Individualize for maximum beneficial effect.

*Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

**Supplied:** Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose® packages of 1000.



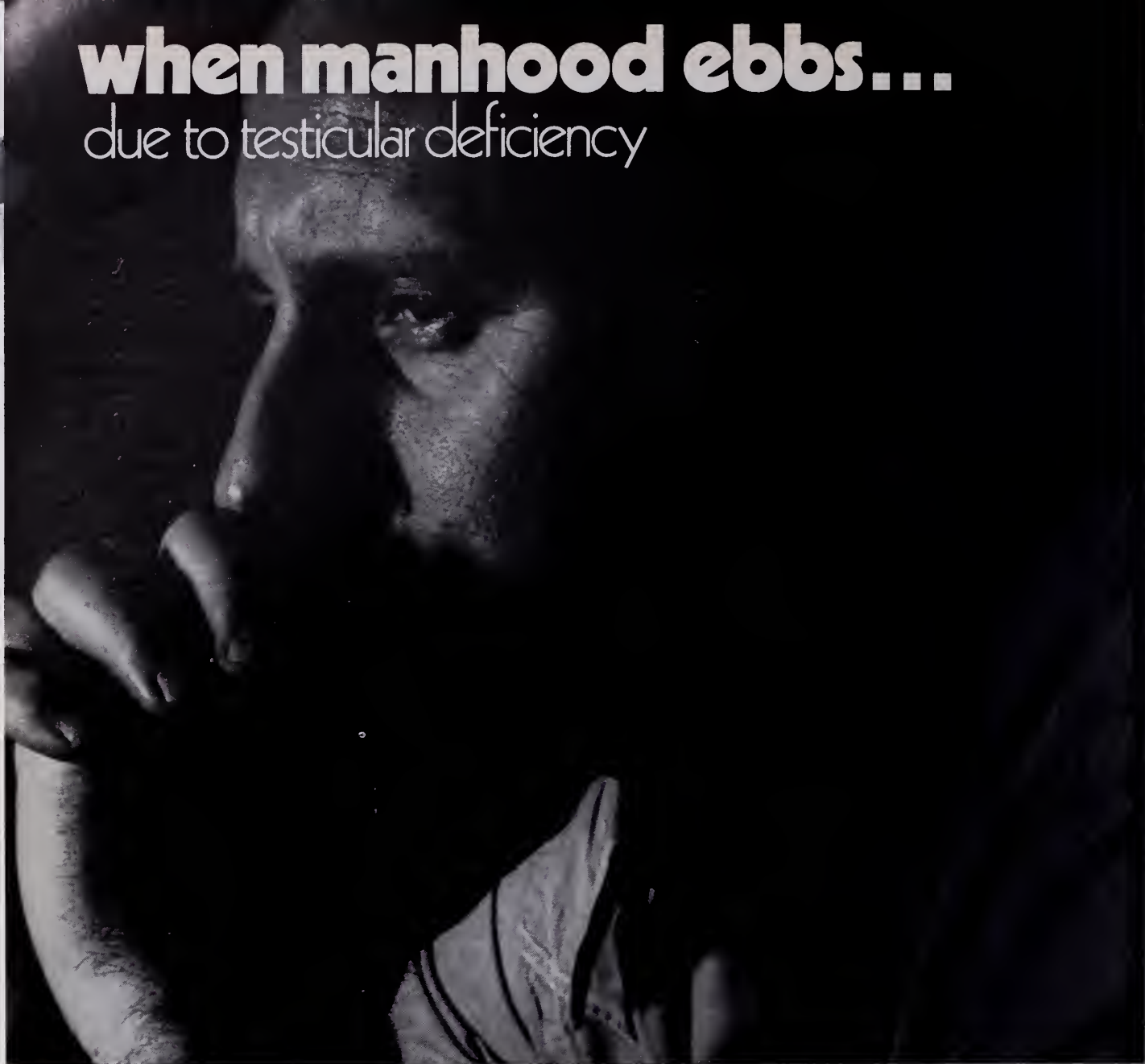
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# MESSAGE FROM THE PRESIDENT



## Physician's Annual Registration

**A**LL doctors in Kentucky are undoubtedly aware by now that the State Board of Medical Licensure has instituted a \$12 per year renewal fee for relicensing of all physicians who have previously been licensed in Kentucky. There seems to be considerable misunderstanding on the part of our members regarding this relicensing fee and I want to take this opportunity to, hopefully, clarify one or two major points.

The State Board of Medical Licensure came about as a result of the desire of Kentucky's physicians to retain medical licensing as a prerogative of the medical profession. When this new agency was formed it was determined that the most feasible place for that office to be located would be in the KMA Headquarters Building. The \$12 relicensing fee (Kentucky was the last state in the nation to institute a relicensing fee) **does not** go to the Kentucky Medical Association. All the money collected from physicians **becomes state funds** and is used to provide necessary services which are required under state statute.

The desire of our profession to retain medical licensure as a physician-only function was largely responsible for our legislative creation of this new Board. While your fees become state funds, I firmly believe they are essential and are being put to proper use on behalf of all Kentucky physicians.

*Lee C. Fessenden*



### DDT-Substitute Pesticides — A Public Health Problem†

WILLIAM P. McELWAIN, M.D., M.P.H.

*Commissioner of Health  
Commonwealth of Kentucky*

THE Environmental Protection Agency banned almost all uses of DDT in the United States, effective January 1, 1973. This action and the de-emphasized use of the other "hard pesticides" such as dieldrin, aldrin, heptachlor, etc., for agricultural purposes has precipitated the necessity to select substitute compounds. The domestic use of DDT had been primarily restricted to cotton, soybeans and peanuts since 1968.

These alternate insecticides, particularly the organophosphates such as parathion, guthion, azodrin, di-syston, etc., and carbamates such as furadan and lannate, present a much greater acute hazard to untrained applicators and others who come in direct contact with them. An intensive effort by State and Federal agencies was recently inaugurated in Kentucky and 13 other southern states to create an awareness of using the alternate insecticides safely. The program was particularly addressed to the small producer who may be less in-

formed. Despite this action, it is anticipated that there will be an influx of human episodes of overexposure this usage season or during the transitional period. Consequently, it is important that physicians become familiar with the diagnosis and treatment procedures in order to institute prompt and proper medical attention, should they be confronted with a poisoning involving these compounds.

There is an indication that pesticide morbidity is a problem in Kentucky. In a recently completed comprehensive study that involved reviewing approximately 1.8 million records at 40 of the State's public hospitals, 387 pesticide episodes serious enough to require physician attention were discovered.

Admission records were reviewed for the four year period, 1968-71 and emergency room records for 1970-71.

Although only 12.4% of the total incidents were agriculturally oriented, the organophosphate insecticides were the most frequently implicated. This group of chemicals was responsible for 52 of the total cases and 41 for the DDT group.

A paper of the study has been considered for publication in a future issue of the *Archives of Environmental Health*.

†This article was prepared by: E. Edsel Moore, Director, Pesticide Program, Division of Environmental Services, Kentucky State Health Department, 275 East Main Street, Frankfort, Kentucky 40601.



# EMERGENCY MEDICAL TREATMENT FOR ACUTE ORGANOPHOSPHATE AND CARBAMATE INSECTICIDE POISONING<sup>1-2</sup>

	Organophosphorus Compounds	Carbamate Compounds
Commercial Products And Generic Names	Malathion Diazinon Dicapthon DDVP (vapona*) Naled (dibrom*) Fenthion (baytex*) Dimethoate (cygon*) Dursban* Mevinphos (phosdrin*) Phorate (thimet*) Monocrotophos (azodrin*) Azinphosmethyl (guthion*) Carbophenothion (trithion*) Fensulfothion (dasanit*) Disulfoton (di-syston*) Demeton (systox*)	Carbaryl (sevin*) Baygon* Zectran* Thiram Vapam* Carbofuran (furadan*) Methomyl (lannate*)
Pharmacologic Action or Site of Toxicity	Anticholinesterase	Anticholinesterase
Modes of Absorption	Ingestion, Inhalation & skin	Ingestion, inhalation & skin
Toxicity	Moderate to EXTREME	Slight (carbaryl) to Moderate (baygon) to Severe — lannate (oral)
S Y M P T O M S	1. mild — anorexia, headache, dizziness, weakness, anxiety, tremors of tongue & eyelids, miosis, impairment of visual acuity. 2. moderate — nausea, salivation, lacrimation, abdominal cramps, vomiting, sweating, slow pulse, muscular tremors. 3. severe — diarrhea, respiratory difficulty, pinpoint and non-reactive pupils, pulmonary edema, cyanosis, loss of sphincter control, convulsions, coma and heart block.	Constriction of pupils Salivation Profuse sweating Lassitude Muscle incoordination Nausea Vomiting Diarrhea Epigastric pain Tightness in chest
T R E A T M E N T	<b>SPEED IS IMPERATIVE</b> 1. atropine injection — 1-4 mg. Repeat 2 mg. when toxic symptoms begin to recur (15-60 minute intervals). Excessive salivation good sign more atropine needed. 2. Keep airways open. Aspirate, use oxygen, insert endotracheal tube. Do tracheotomy & give artificial respiration as needed. 3. For ingestion lavage stomach with 5% sodium bicarbonate if not vomiting. For skin contact, wash with soap and water (eyes — wash with isotonic saline) Wear rubber gloves while washing contact area. Treatment for parathion has been improved with the availability of 2-PAM (2-pyridine-aldoxime methiodide). In addition to atropine give 2-PAM 1 gm. intravenously at a slow rate over a period of 5 minutes and administer again periodically as indicated. More than one injection may be required. <b>AVOID MORPHINE, THEOPHYLLIN, AMINOPHYLLIN, BARBITURATES OR PHENOTHIAZINES.</b> Do not give atropine to a cyanotic patient. Give artificial respiration first, then administer atropine.	<b>SPEED IS IMPERATIVE</b> 1. atropine injection — 1-4 mg. Repeat 2 mg. when toxic symptoms begin to recur (15-60 minute intervals). Excessive salivation good sign more atropine needed. 2. Keep airways open. Aspirate, use oxygen, insert endotracheal tube. Do tracheotomy and give artificial respiration as needed. 3. For ingestion, lavage stomach with 5% sodium bicarbonate if not vomiting. For skin contact, wash with soap & water (eyes — wash with isotonic saline). Wear rubber gloves while washing contact area. 4. Oxygen 5. <b>AVOID THEOPHYLLIN AND AMINOPHYLLIN OR BARBITURATES.</b> 2-PAM & other oximes are contra-indicated for routine usage.
Laboratory Tests	No simple test. Only complex laboratory procedures. Initial blood cholinesterase is a helpful diagnostic aid.	No simple test. Only complex laboratory procedures. Initial blood cholinesterase is a helpful diagnostic aid. 1-naphthol, normally found in traces, is excreted in urine in much higher concentrations following carbaryl (sevin*) ingestion.
* Trade Name		

1. Hayes, Wayland J., Revised 1963, *Clinical Handbook on Economic Poisons*, p.p. 12-23. A revision of *Public Health Service Publication No. 476, U.S. Government Printing Office, Washington, D.C.*

2. U.S. Navy Disease Vector Ecology & Control Center. Chart: *Emergency Medical Treatment for Acute Pesticide Poisoning* (Misc. 348; Revised June, 1972).



# THE INSURANCE PAGE



## Substandard Health Insurance

**T**he Health Insurance Standards Committee of the Kentucky Foundation for Medical Care has been charged with the responsibility of assisting the Foundation to develop minimal standards of coverage for health insurance offered to the citizens of this Commonwealth and to use its influence to see that substandard coverage is upgraded or removed from the market. This appears to be a monumental task.

A listing of insurance companies doing business in the state of Kentucky, contains approximately 1,182 companies. When one examines the number of policies offered by Blue Cross-Blue Shield, one decided that the number of individual policies offered for sale is astronomical.

Most of the group policies sold in Kentucky seem to be fairly satisfactory policies since they have been established by bargaining between employer representatives, union representatives and the insurance companies. One of the major advantages of group policies is that the entire group is covered, and the problem of insurability does not arise.

When individual policies are sold, they are often sold through the use of deceptive advertising, and more often than not the deceptive advertising leads the patient to an illogical conclusion that he will get broad insurance coverage even though he is not entitled to it. Both the salesman and applicant tend to minimize the patient's past illness and the policy is issued without any statement of past illness. The salesman then receives his total payment from the first premium and forgets about the insured.

After a year or so, when the insured has a

claim, the company suddenly becomes aware that it is possible that this patient may not have been insurable. For the first time they ask the attending physician about pre-existing disease and the date of onset of the underlying condition causing the recent illness. When pre-existing illness is discovered the insured finds that he receives no payment. The insurance company has had the benefit of one to two years insurance premiums, the salesman has made his commission and the insured has nothing.

Two changes in the present insurance laws would help this situation greatly. One is that all insurance companies should be required to follow the example of Blue Cross-Blue Shield and obtain a statement of previous illness or insurability from the attending physician. If the patient has no attending physician, insurability should be determined by history and physical examination prior to issuing the contract. The second change would be that the salesman receive a much smaller commission from the first premium payment and that he receive a continuing service payment each time the insured pays his annual premium. In this manner the salesman has some incentive for maintaining a satisfactory relationship with the insured.

It would be an almost impossible task to attempt standardization of all the policies offered by the 1,182 companies doing business in Kentucky, but the above two recommendations would go a long way toward removing substandard hospitalization insurance policies from the market.

LEWIS DICKINSON, M.D.



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*From the files of the*

**COMMITTEE FOR THE  
STUDY OF MATERNAL MORTALITY**

---

**T**HIS 21-year-old married white, gravida 3, para 2, was under the care of a private physician. She had a cholecystectomy July, 1969, with no sequela. She was Rh negative and received Rhogam following her second delivery. Her EDC with this current pregnancy was October 17, 1970.

She was admitted in active labor at 8:05 p.m. on September 23, 1970. Examination revealed the cervix 3 cm dilated with a vertex presentation at the midpelvis with intact membranes. Her blood pressure was 120/84, pulse 90.

She was sedated with 50 mg Demerol, 0.4 mg Scopolamine and 1/2 cc Lofran IV at 9:10 p.m. when the contractions were every three minutes.

She received another 50 mg Demerol, 0.4 mg. Scopolamine and 1/2 cc Lofran IM at 11:05 p.m. and was taken to the delivery room.

Anesthesia consisting of N<sub>2</sub>O 75%, O<sub>2</sub> 25%, and Trilene % was started at 11:20 p.m. The patient's lips became red on the delivery table and the anesthesia was reduced to mainly O<sub>2</sub>.

She delivered spontaneously at 11:25 p.m. a 7 lb male that cried spontaneously. A right mediolateral episiotomy was done. The placenta was intact and the uterus was explored revealing no uterine defect or retained tissue. The cervix was checked. The last part of the episiotomy was repaired, without anesthesia. The patient moved, but was not alert and there was improvement of her color. Her blood pressure was 104/90, pulse 120. She received 1 cc of Pitocin and ergotrate IM with the delivery of the placenta. The bleeding was normal and the uterus remained firm. Cord blood was obtained and the Coombs was negative. The patient was moved to the recovery room at 11:45 p.m. Her color was described as flushed, but her nail beds remained slightly cyanotic. She began hyperventilating but was alert. Her blood pressure was 120/80, pulse 124, respiration 32. This condition continued until 12:40 a.m. and oxygen was administered. At 12:40 a.m. her blood pressure was 132/70, temperature 100.4°, her pulse continued around 120. The patient was alert and felt better. She received Declostatin orally. She was talking and doing well at 3:00 a.m., her blood pressure was 132/80, pulse 126.

She was still hyperventilating at 3:50 a.m., though she was propped up in bed and said she felt fine. Respirations were 50 min at 3:55. Five minutes later the patient had a convulsion and stopped breathing. Oxygen was given in addition to intravenous sodium bicarbonate and external massage. Lactate was given in the jugular vein. Efforts to pass an endotracheal tube were unsuccessful.

Her physician was called at 4:05 a.m. along with a medical consultant. Adrenalin was given into the myocardium, but the heart began fibrillating and couldn't be converted in spite of electric shock. The heart ceased beating at 4:55 a.m. Respiration was never re-established. An autopsy was obtained.

Necropsy revealed petechial hemorrhages of the lungs indicating anoxia. Microscopic sections manifested multiple capillary emboli in the lungs, suggestive of amniotic fluid emboli. However, special stains for keratin and fibrin were not confirmatory, leading to suspect the material in the capillaries may have been altered. The presence of frothy blood in the pulmonary artery at necropsy suggested the possibility of air embolism. The manifestations of cerebral edema, laryngeal edema, capillary emboli and heart failure cells in the lungs plus visceral congestion, all lead to respiratory failure probably due to amniotic fluid.

#### **Comment**

The Committee on Maternal Mortality classified this death as a direct obstetrical one with no preventable factors. The diagnosis of amniotic fluid embolism was made, although it was not made with absolute certainty. Amniotic fluid embolism is a tragic situation. Maternal death during labor occurs infrequently when compared with the number of deaths during pregnancy, delivery, and in the puerperium. However, of the few deaths which do occur during labor, amniotic fluid embolism is a major cause. This patient exhibited the classic signs of dyspnea and cyanosis. Most of the patients die undelivered with the classic signs and symptoms of the embolism. The few who survive the initial shock may succumb from postpartum hemorrhage. Widespread embolization of the pulmonary arterioles and capillaries by particulate matter is believed to be responsible for the pathologic lesions. When such cases have been reviewed, two observations demand explanation. In most instances, the amount of mechanical blockage of the pulmonary vessels by amniotic debris is hardly sufficient to be the cause of death. The other is the fact that finding the blood is liquid at postpartum examination and clotting of any degree in the large vessels is rarely seen. However, one must add that such findings may be observed in cases of sudden death regardless of its cause. It therefore appears that death in this situation cannot always be explained by the effects of embolism alone.

Treatment of amniotic fluid embolism is preven-

### Maternal Mortality

tive, supportive and definitive. A tumultuous labor, whether originating spontaneously or stimulated by oxytocin, may be treated by the administration of sedatives or even, if necessary, general anesthesia. The fact that amniotic fluid embolism is almost uniformly fatal creates in the minds of most the belief that any treatment is futile. In a certain number of cases, energetic treatment might enable the patient to survive. Initially, the treatment is directed toward the relief of the respiratory distress, then the prevention of death from a coagulation defect. These patients frequently can be delivered from below and Cesarean section therefore is rarely indicated. A forceps operation may salvage the fetus when the cervix is completely dilated. This reduces respiratory distress in the mother. The vagina and uterus should be explored to exclude any possibilities of rupture or lacerations. Recovery then depends upon maintenance of normal blood volume in addition to adequate blood replacement. The treatment must include the restoration of normal fibrinogen concentration.

### Family Practice Board Announces Exam

The American Board of Family Practice announces that it will give its next two-day written certification examination on October 20-21, 1973, in various centers throughout the United States. It is necessary for each physician desiring to take the examination to file a completed application with the Board office before August 1, 1973.

Information regarding the examination can be obtained by contacting: Nicholas J. Pisacano, M.D., Secretary, American Board of Family Practice, Inc., University of Kentucky Medical Center, Annex #2, Room 229, Lexington, Kentucky 40506.

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**Indications:** Nonobstructed urinary tract infections (mainly cystitis, pyelitis, pyelonephritis) due to susceptible organisms. **Important Note:** *In vitro* sensitivity tests not always reliable; must be coordinated with bacteriological and clinical response. Add aminobenzoic acid to follow-up culture media. Increasing frequency of resistant organisms limits usefulness of antibacterial agents, especially in chronic and recurrent urinary infections. Maximum safe total sulfonamide blood level, 20 mg/100 ml; measure levels as variations may occur.

**Contraindications:** Hypersensitivity to sulfonamides; infants less than 2 months of age; pregnancy at term and during the nursing period.

**Warnings:** Safety in pregnancy not established. Do not use for group A beta-hemolytic streptococcal infections, as sequelae (rheumatic fever, glomerulonephritis) are not prevented. Deaths reported from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias. Sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. CBC and urinalysis with careful microscopic examination should be performed frequently.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, severe allergy or bronchial asthma. Hemolysis, frequently dose related, may occur in glucose-6-phosphate dehydrogenase-deficient patients. Maintain adequate fluid intake to prevent crystalluria and stone formation.

**Adverse Reactions:** *Blood dyscrasias:* Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia; *Allergic reactions:* Erythema multiforme (Stevens-Johnson syndrome), generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis; *Gastrointestinal reactions:* Nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis; *C.N.S. reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia; *Miscellaneous reactions:* Drug fever, chills and toxic nephrosis with oliguria and anuria. Periarteritis nodosa and L.E. phenomenon have occurred. Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

**Supplied:** Tablets containing 0.5 Gm sulfisoxazole.



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Gantrisin quickly reaches peak antibacterial concentrations in the urine—usually in 2 to 3 hours. With the recommended dosage regimen, Gantrisin maintains these high urinary levels throughout therapy to combat such susceptible organisms as *E. coli*, *Klebsiella-Aerobacter*, *Staphylococcus aureus*, *Proteus mirabilis* and, less frequently, *Proteus vulgaris*.

## 2.

### Generally good tolerance

Because of Gantrisin's high solubility and rapid excretion, therapy is relatively free of adverse reactions serious enough to require discontinuance of the drug (3.1% of 1002 patients in a recent study\*). Even minor reactions are comparatively infrequent, but may include nausea, headache and vomiting.

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\*Koch-Weser, J., et al.: *Arch. Intern. Med.*, 128:399, 1971.

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Soothing, miscible ointment permits complete contact with affected tissue.

Usually cures in a single 14-day course of therapy<sup>2,3,4</sup>

## **Safe**

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No side effects, clinical reports of irritation or sensitization extremely rare.

## **Convenience**

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Encourages patient acceptance and cooperation. Therapy is easy to start in your office.

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CANDEPTIN (candicidin) is significantly more potent *in vitro* than nystatin<sup>5</sup>. CANDEPTIN Vaginal Ointment and Tablets have a clinical record of cure rates of 90% and more in pregnant and non-pregnant patients!<sup>1,4,6</sup> In recent studies on CANDEPTIN VAGELETTES Vaginal Capsules, involving both gravid and non-gravid patients, a 100% culture-confirmed cure rate was achieved with a single 14-day course of therapy.<sup>2,3</sup>

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**CANDEPTIN® (candicidin)  
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**Description:** CANDEPTIN (candidin) Vaginal Ointment contains a dispersion of candidin powder equivalent to 0.6 mg. per gm. or 0.06% Candidin activity in U.S.P. petrolatum. 3 mg. of Candidin is contained in 5 gm. of ointment or one applicatorful. CANDEPTIN Vaginal Tablets contain Candidin powder equivalent to 3 mg. (0.3%) Candidin activity dispersed in starch, lactose and magnesium stearate.

CANDEPTIN VAGELETES Vaginal Capsules contain 3 mg. of Candidin activity dispersed in 5 gm. U.S.P. petrolatum.

**Action:** CANDEPTIN Vaginal Ointment, Vaginal Tablets, and VAGELETES Vaginal Capsules possess anti-moniial activity.

**Indications:** Vaginitis due to *Candida albicans* and other *Candida* species.

**Contraindications:** Contraindicated for patients known to be sensitive to any of its components. During pregnancy manual Tablet or VAGELETES Capsule insertion may be preferred since the use of the ointment applicator or tablet inserter may be contraindicated.

**Caution:** During treatment it is recommended that the patient refrain from sexual intercourse or the husband wear a condom to avoid re-infection.

**Adverse Reaction:** Clinical reports of sensitization or temporary irritation with CANDEPTIN Vaginal Ointment, Vaginal Tablets or VAGELETES Vaginal Capsules have been extremely rare.


**Dosage:** One vaginal applicatorful of CANDEPTIN Ointment or one Vaginal Tablet or one VAGELETES Vaginal Capsule is inserted high in the vagina twice a day, in the morning and at bedtime, for 14 days. Treatment may be repeated if symptoms persist or reappear.

**Available Dosage Forms:** CANDEPTIN Vaginal Ointment is supplied in 75 gm. tubes with applicator (14-day regimen requires 2 tubes). CANDEPTIN Vaginal Tablets are packaged in boxes of 28, in foil with inserter—enough for a full course of treatment. CANDEPTIN VAGELETES Vaginal Capsules are packaged in boxes of 14 (14-day regimen requires 2 boxes.)

Store under refrigeration to insure full potency.

Federal law prohibits dispensing without prescription.

**References:** 1. Olsen, J.R.: *Journal-Lancet* 85:287 (July) 1965. 2. Giorlando, S.W.: *Ob/Gyn Dig.* 13:32 (Sept.) 1971. 3. Decker, A.: *Case Reports on File, Medical Department, Julius Schmid*. 4. Giorlando, S.W., Torres, J.F., and Muscillo, G.: *Am. J. Obst. & Gynec.* 90:370 (Oct. 1) 1964. 5. Lechevalier, H.: *Antibiotics Annual 1959-1960*. New York, Antibiotica Inc., 1960. pp. 614-618. 6. Friedel, H.J.: *Maryland M.J.*, 15:36 (Feb.) 1966.

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**CANDEPTIN®**  
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# Pinworm therapy is often a family affair



**Contraindications:** History of hypersensitivity to thiabendazole.

**Warnings:** If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.

**Precautions:** Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction,

patients should be carefully monitored.

**Adverse Reactions:** Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia malodor of the urine, crystalluria, hematuria; appearance of live *Ascaris* in the mouth and nose. Hypersensitivity reactions



## INDICATION | DOSAGE SCHEDULE

MINTEZOL® (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infections. Dosages are weight related. For your convenience, the information in the weight-dose chart below is included in the full prescribing information and in the 1973 edition of PDR.

*The recommended maximum daily dose of MINTEZOL is 3 g (6 tablets).*

MINTEZOL should be given after meals if possible. Dietary restriction, complementary medications, and cleansing enemas are not needed.

The usual dosage schedule for all conditions is two doses per day. The size of the dose is determined by the patient's weight.

Weight-dose chart:

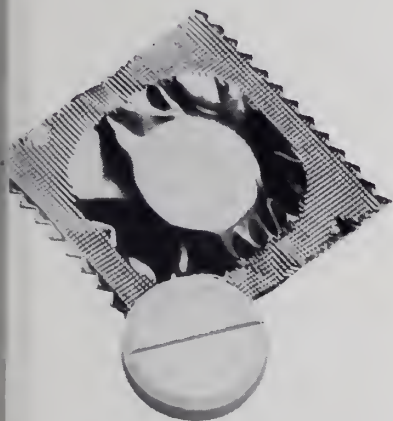
WEIGHT (lb)	EACH DOSE (g)	TABLETS
25	0.25	½
50	0.5	1
75	0.75	1½
100	1.0	2
125	1.25	2½
150 & over	1.5	3

The regimen for each indication follows:

INDICATION	REGIMEN	COMMENTS
Pinworm disease	Two doses per day for 1 day. Repeat in 7 days.  This regimen is designed to reduce the risk of reinfection.	If this is not practical, give 2 doses per day for 2 successive days.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses per day for 2 successive days.	A single dose of 20 mg/lb or 50 mg/kg may be employed as an alternative schedule, but a higher incidence of side effects should be expected.
Creeping eruption	Two doses per day for 2 successive days.	If active lesions are still present 2 days after completion of therapy, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses per day for 2 to 4 successive days according to the response of the patient.	The optimal dosage for the treatment of trichinosis has not been established.

\*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.

# Chewable Tablets 500 mg Mintezol® (THIABENDAZOLE | MSD)



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everyone in the family  
can keep to the  
regimen you prescribe

include: fever, facial flush, chills, conjunctival injection, angioedema, anaphylaxis, skin rashes, erythema multiforme (including Stevens-Johnson syndrome), and lymphadenopathy.

**Supplied:** Chewable tablets, containing 500 mg thiabendazole, in boxes of 36, strip packaged, individually foil wrapped; Suspension, containing 500 mg thiabendazole per 5 ml, in bottles of 120 ml.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

# Continuing Educational Opportunities

From The

## KMA Postgraduate Medical Education Office

### SEND IN MEETING INFORMATION

Many medical organizations are setting dates for their summer and fall meetings. At the same time they are choosing the topics to be discussed, arranging for speakers and planning programs.

The Continuing Medical Education office of the Kentucky Medical Association would like to urge these societies and organizations to notify this office of these dates and topics so they can be added to the "Continuing Education Opportunities" calendar in *The Journal*. In this way conflicts in dates can be avoided and a wider audience can be informed of these upcoming meetings.

Please send such information, when available to the KMA Continuing Medical Education Office, 3532 Ephraim McDowell Drive, Louisville, Ky. 40205.

### IN KENTUCKY

#### MAY

- 9-12 Annual Meeting, Kentucky Chapter, American Academy of Family Physicians, Ramada Inn-Bluegrass Convention Center, Louisville
- 11-12 Spring meeting, Kentucky Orthopaedic Society, Rowntowner Motor Lodge, Covington
- 17 "Medical Aspects of Sports Seminar," Eastern Kentucky University, Richmond
- 24 7th Trustee District meeting, Catalina Motor Inn, Frankfort
- 24-25 Spring meeting, Kentucky Chapter, American Academy of Pediatrics and spring postgraduate course, University of Kentucky Department of Pediatrics, Lexington
- 25 Postgraduate course, "Hypo and Hyperthyroidism", Duncan R. MacMillan, M.D., Louisville, Children's Hospital Lecture Series, Children's Hospital Amphitheater, 7 p.m., Louisville
- 25-26 Spring meeting, Kentucky Surgical Society, Jenny Wiley State Park, Prestonsburg

#### JUNE

- 1-2 Conference, "Drugs and Techniques in Anesthesia," University of Kentucky Medical Center\*, Program Chairman: John E. Plumlee, M.D. Registration fee: \$50.00.

- 6 12th Trustee District meeting, Somerset
- 12 3rd Trustee District meeting, Hopkinsville
- 14-15 Emergency Room Nurses Seminar, Ramada Inn, Louisville

### IN SURROUNDING STATES

#### MAY

- 12 Postgraduate course, "Gastrointestinal Endoscopy: Techniques and Applications," Cleveland Clinic Foundation, Cleveland

#### JUNE

- 13-14 Postgraduate course, "Symposium on Infectious Diseases," Cleveland Clinic Foundation, Cleveland
- 24-28 AMA Annual Meeting, Americana Hotel, New York

*\*For further information regarding conferences and workshops at the University of Kentucky, contact Ronald D. Hamilton, M.D., Director of Continuing Education, University of Kentucky College of Medicine, Lexington, Kentucky 40506.*



### To Remember -

The AMA has fully  
accredited the KMA  
Annual Meeting for  
continuing education.

Mark these dates:  
September 18-20, 1973.





## Placidyl® (ETHCHLORVYNOL) Brief Summary

**Indications**—Placidyl (ethchlorvynol) is indicated for short-term hypnotic therapy in the management of insomnia.

**Contraindications**—Drug hypersensitivity and porphyria.

**Warnings**—Not recommended during the first and second trimester of pregnancy. Caution patients against possible combined exaggerated effects with alcohol, barbiturates, tranquilizers or other CNS depressants. Exaggerated effects might result in blurring of vision, paralysis of accommodation and profound hypnosis. Caution patients concerning operating a motor vehicle, operating machinery, or performing hazardous operations requiring alertness after taking the drug. ADMINISTER WITH CAUTION TO PATIENTS WITH SUICIDAL TENDENCIES AND DO NOT PRESCRIBE LARGE QUANTITIES OF THE DRUG. Adjustment of the dosage of oral anticoagulants might be necessary when beginning ethchlorvynol therapy, during therapy, or after stopping therapy. This drug is not recommended for use in children. PLACIDYL HAS THE POTENTIAL FOR DEVELOPMENT OF PSYCHOLOGICAL AND PHYSICAL DEPENDENCE. INSTANCES OF SEVERE WITHDRAWAL SYMPTOMS, INCLUDING CONVULSIONS AND DELIRIUM CLINICALLY SIMILAR TO THOSE SEEN WITH BARBITURATES, HAVE BEEN REPORTED IN PATIENTS TAKING REGULAR DOSES AS LOW AS 1000 MG. PER DAY FOR A PERIOD OF TIME WHEN THE DRUG WAS SUDDENLY DISCONTINUED. PROLONGED ADMINISTRATION OF THE DRUG IS NOT RECOMMENDED. Addiction-prone patients or those who are likely to increase dosages of the drug on their own initiative should be observed for evidence of withdrawal or symptoms which may indicate possible withdrawal or abstinence symptoms. Signs and symptoms associated with withdrawal and abstinence include unusual anxiety, tremor, ataxia, slurring of speech, memory loss, perceptual distortions, irritability, agitation and delirium. Other well defined signs and symptoms, not necessarily due to withdrawal and abstinence, may include anorexia, nausea or vomiting, weakness, dizziness, sweating, muscle twitching and weight loss. Abrupt discontinuance of Placidyl following prolonged overdosage may result in convulsions and delirium.

**Precautions**—Toxic amblyopia has been reported with long-term continuous use of ethchlorvynol. Permanent visual defects have been observed, although amblyopia has improved after discontinuance of the drug. Drug dosage should be limited in elderly and debilitated patients to the smallest effective amount. If pain is present, this drug should only be given if insomnia persists after pain is controlled with analgesics. Caution is advised in prescribing the drug for patients who are being treated with either MAO inhibitors or antidepressants. Transient delirium has been reported with the combination of Placidyl and amitriptyline. Drug dosage should be reduced if prescribed for patients receiving MAO inhibitors or antidepressants. Caution should be exercised in patients with impaired hepatic or renal function. Patients may respond unpredictably to barbiturates or alcohol or who exhibit excitement and release of inhibition in association with such agents, may also react in this way to Placidyl. Rarely, patients may exhibit symptoms suggestive of an unusual susceptibility to the drug; such as prolonged hypnosis, profound muscular weakness, excitement, hysteria, syncope without marked hypotension. Transient dizziness or ataxia may occur.

**Adverse Reactions**—Hypotension, nausea or vomiting, gastric upset, aftertaste, blurring of vision, dizziness, facial numbness, and allergic reaction manifested by urticaria have been reported following Placidyl administration. Mild "hangover" and symptoms of mild excitation have occurred in some patients. There have been rare reports of cholestatic jaundice occurring in patients taking ethchlorvynol. A few cases of thrombocytopenia have been reported in patients receiving ethchlorvynol. 305432



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# The JOURNAL of the Kentucky Medical Association

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VOLUME 71

MAY 1973

No. 5

## The Abdominal Wall as a Source of Pain

HAROLD W. BAKER, M.D.

Louisville, Kentucky

*"Pelvic pain" is frequently due to abdominal wall soreness rather than visceral disease. Presented is a procedure used in determining the cause of this pain.*

**P**ELVIC pain is one of the most common reasons for patients to seek gynecological consultation. Through the years it has been my observation that many patients have been diagnosed and treated erroneously as having visceral disease including pelvic inflammatory disease, endometriosis, pelvic congestion, appendicitis and diverticulitis. Other patients with negative findings have been labelled, unfortunately, psychoneurotic and referred to a psychiatrist. A few patients have been subjected to laparotomy with no pathology found. It is interesting that their pain lessened for a few weeks while they were convalescing and taking good care of themselves, but after a time the pain returned.

The routine history is usually not revealing due to the fact that the patient cannot relate the pain to any specific time of her cycle nor can she associate it with bladder or bowel function. She does not recall the exact onset of the pain nor any relation to trauma. Once the physician is aware of the possibility of the abdominal wall being the source of the pain, then his direct questions often elicit affirmative answers. These include: "Is the pain brought on or made worse by changing position, lifting, bending, coughing or straining?" "Is the pain eased by holding your hand firmly over the area?" "Does a girdle help?"

The physical examination is carried out as

usual looking for organic disease in the abdomen, pelvis and rectum. When a patient is tender on bimanual pelvic examination and particularly when she states "That's the pain", a maneuver that is helpful is to remove the hand doing the abdominal portion of the bimanual without changing the location and pressure of the vaginal fingers and then ask her if the pain has changed. Then reverse the procedure by replacing the abdominal hand on the tender area and retracting the vaginal fingers about one inch and reducing the pressure so that the vaginal fingers are not touching any organ except the vagina. Again determine whether her pain has changed. This maneuver may need to be repeated to ascertain which hand seems to be eliciting the tenderness. With many patients this has been the moment I first became suspicious that the abdominal wall might be the source of their pain.

The recto-vaginal examination is essential in ruling out abnormalities in the cul-de-sac such as free blood from a tubal pregnancy, tender retroflexed uterus, endometriosis, prolapsed ovary, or diverticulitis. The smooth 5 mm to 10 mm spherical protrusions from a rather indefinite pelvic mass is characteristic of diverticuli of the sigmoid.

Once the physician is certain that the patient does not have a surgical abdomen and does not have an acute organic problem in the pelvis, then he is ready to test the abdominal wall. The patient's legs are taken out of the stirrups and she lies flat and relaxed. She is asked to point out the location of her pain. The physician then palpates this area and surrounding areas

with gently increasing pressure until he is able to duplicate the same pain of her chief complaint. Usually the duplication effort is successful, but if not or if the patient says "That is not quite it", the test loses some of its significance but should be done nevertheless. The patient is requested to grasp each side of the examining table and then to bring both legs up simultaneously to about a 45° angle and hold them there. Often it is helpful to have the physician's assistant support the patient's heels lightly. Pressure with the examining hand is again applied to the same area where the tenderness was previously elicited and the patient is asked to compare the degree of tenderness evoked when the legs were down. Most patients have never undergone an examination like this before so a second or third test is helpful to avoid confusion.

If the patient can make a clear evaluation that her tenderness to the physician's palpation is the same or worse with her legs elevated, the diagnosis of abdominal wall soreness is confirmed. Whereas when the tenderness disappears with the abdominal muscles splinting the abdominal contents, then the diagnosis is made that her pain is indeed visceral and further studies will be necessary.

The cause of the abdominal wall soreness is

usually not clear and I have found that it is not necessary to find a cause. A simple explanation to the patient will suffice that sometime in the past she probably ran into a door knob or dresser drawer, or was kicked in the abdomen by one of her children, or she tore a few muscle fibers during heavy lifting or vomiting.

A few patients are still incredulous, so I proceed to compare her sore muscle to the baseball player whose arm is sore and the young executive with left chest pain which turns out to be a sore pectoral muscle rather than a coronary.

The treatment is quite simple. First the reassurance that she does not have any serious condition causing the pain may be all that is necessary. Many of these patients were worried that they might have cancer. Second, local heat should be prescribed in the form of hot baths, heating pad, and the application of a linament to the area at bedtime. Third, she should wear a girdle part of the day and should apply the flat of her hand firmly to the area for a few minutes when the pain begins.

To date I have not found this leg raising test to give an erroneous diagnosis. To be sure a few patients have a combination of pelvic tenderness and abdominal wall soreness, but even in these cases the elimination of one component of their pain is most helpful.

## Manuscript Memos

*Manuscripts should be submitted in duplicate to the Journal of KMA, an original copy and one carbon, and typed with double spacing. Maximum length of an article should not exceed 4500 words; the Board of Consultants on Scientific Articles prefers that they be briefer than this when possible.*

*In submitting a manuscript, the author is requested to include a concise summary, not to exceed 35 words, to be used as a sub-title when the article is published in The Journal. The purpose of the summary is to create additional interest and encourage greater readership.*

*Footnotes and bibliographies should conform to the style of the Quarterly Cumulative Index Medicus published by the American Medical Association. This requires in the order given name of author, title of article, name of periodical, with volume, page, month—day of month if weekly—and year. The Journal of the KMA does not assume responsibility for the accuracy of references used with scientific articles.*

*All scientific material appearing in The Journal is reviewed by the Board of Consultants on Scientific Articles. The editors may use up to six illustrations with the essayist bearing the cost of all over three one-column halftones.*

*Arrangements for reprints of an article should be made directly with the publisher of The Journal, Gibbs-Inman Printing Company, 817 W. Market St., Louisville, Ky.*

*The bylaws of the Kentucky Medical Association provide that all scientific discussions and papers read before the KMA Annual Meeting shall be referred to the KMA Journal for consideration for publication. The bylaws further state that the editor or the associate editor may accept or reject these papers as it appears advisable and return them to the author if not considered suitable for publication.*

*Please mail your scientific articles to The Journal of the Kentucky Medical Association, 3532 Ephraim McDowell Drive, Louisville, Kentucky 40205.*



# Acne Vulgaris—Long Term Antibiotic Use†

MAURICE T. FLIEGELMAN, M.D.\*

Louisville, Kentucky

*A discussion of the etiology and pathogenesis of acne vulgaris and its general treatment will precede a presentation of the use of antibiotics in its management. Drug beneficial and adverse effects will be mentioned.*

**A**CNE vulgaris is a chronic, inflammatory disease of the pilosebaceous follicles characterized by comedones, papules, pustules, cysts and nodules in the areas of predilection which are, primarily, the face, neck, upper trunk and arms. It is mostly a disease of adolescence, with almost 80% of teenagers being involved before attaining adulthood, at least to some degree. However, it may persist in adults for many years.

Much has been written in the literature about acne vulgaris, its etiology, pathogenesis and treatment. However, relatively little of specific nature concerning the long-term use of antibiotics in this condition has been published for the non-dermatologist. It was felt that such information, combined with a short discussion of its etiology, pathogenesis and other treatment modalities would be of some interest.

## Etiology and Pathogenesis

In brief, the etiology and pathogenesis of acne vulgaris can be divided into three broad areas:

1. *Heredity.* Severe acne tends to beget severe acne. This is worth discussing in history-taking since it may give a clue concerning prognosis and length of and vigor of treatment.
2. *Hormones.* Androgens affect acne unfavorably; estrogens favorably. Corticosteroids produce an anti-inflammatory effect.
3. *Infection.*
  - a. *Corynebacterium acnes.*

- b. *Staphylococcus albus.*
- c. *Pityrosporon ovale.*

The above elaborate lipases which break down the triglyceride fraction of sebum into free fatty acids. These provoke an inflammatory response.

## Treatment

In addition to the antibiotic measures to be discussed in more detail and the endocrine approach mentioned in passing previously, frequently used measures include:

1. Diet and vitamins—not nearly as important as formerly thought.
2. Local measures
  - a. Cleaners
  - b. Keratolytics, including Vitamin A acid
3. Antiseborrheic measures
4. Ultraviolet light
5. General measures—rest, occasionally mild sedation, sun exposure, etc.
6. Psychological approach—most important, especially in those who feel socially ostracized.

## Beneficial Action of Antibiotics

Tetracycline is the most frequently used antibiotic in the treatment of acne vulgaris because of effectiveness and low cost. It has been determined that it is excreted through the pilosebaceous apparatus; hence, its effectiveness. Penicillin is not excreted through the pilosebaceous apparatus; hence, its relative ineffectiveness.

Tetracycline was found to be effective in reducing the number of bacteria on the skin surface and the number of organisms remained lower as long as the antibiotic was continued. No evidence of antibiotic resistance to these organisms (staph or corynebacterium) was noted since these strains were of low pathogenicity. Some investigators feel it enzymatically blocks lipase activity in corynebacterium acnes.

†Paper presented at the AMA Clinical Convention in Cincinnati on November 27, 1972

\*From the Section of Dermatology, University of Louisville School of Medicine, Louisville

A number of dosage schedules have been used successfully. One reasonably acceptable schedule is 250 mgms. q.i.d. for five days, then b.i.d. or one daily almost indefinitely, depending on the patient's response. Some dermatologists use alternate courses; on for two months, off for one or two months. This may be used for several months or as long as one to two years.

Clindamycin (Cleocin), lincomycin (Lincocin), and doxycycline (Vibramycin) may be used with approximately equal change of clinical success as generic tetracycline.

"Good to excellent results were obtained with clindamycin (43%), lincomycin (46%) and doxycycline (41%). This compared with 42% good to excellent results with tetracycline under similar conditions.<sup>1</sup>"

The use of antibiotic in comedonal acne and acne conglobata have been somewhat disappointing. Their greatest usefulness has been in papular, inflammatory and papulo-pustular forms.

#### Adverse Effects of Tetracyclines<sup>2</sup>

The various adverse effects of tetracyclines must be kept in mind, such as:

1. Hypersensitivity
2. May cause tooth discoloration—last half of pregnancy (infancy and early childhood)

3. If renal impairment exists, look out for systemic accumulations and liver toxicity. Lower doses indicated.

4. Photosensitivity

5. Formation of a stable calcium complex in bone forming tissues.

6. Overgrowth of nonsusceptible organisms, including fungi

7. When syphilis is suspected, darkfield and other appropriate tests are indicated.

8. Depression of plasma prothrombin activity has been noted.

9. Gastrointestinal: anorexia, nausea, vomiting, diarrhea, glossitis, enterocolitis, etc

10. Blood: hemolytic anemia, thrombocytopenia, neutropenia and eosinophilia

#### Summary

The etiology and pathogenesis of acne vulgaris is briefly discussed, as well as general treatment measures.

The specific role of antibiotics, especially the tetracyclines, has been discussed in some detail. Antibiotics are a most useful adjunctive form of treatment in many cases of acne vulgaris.

#### References

1. Moss, H. V.: Acne Vulgaris: Treatment with Three Newer Antibiotics, *Cutis* 10: 375-376, 1972.
2. Physicians Desk Reference: various pages, under brand name Tetracyclines, 1972.



# Surgical Treatment of Complications of Myocardial Infarction†

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CORONARY artery occlusive disease is the leading cause of death in our country today, being responsible for over one-half million fatalities each year. In addition, countless others suffer from angina pectoris, left ventricular failure or one of the other complications of this disease. Many of the complications of myocardial infarction are now amenable to surgical treatment. (Table I) Time permits us to discuss only a few of these. Left ventricular rupture usually results in immediate death, but there have been occasional cases of contained rupture or false aneurysm formation which have been treated successfully. Left ventricular aneurysm can be diagnosed pathologically in approximately five per cent of patients surviving myocardial infarction. Clinically significant ventricular aneurysms occur much less frequently.

Repair of post-infarction ventricular aneurysm is accomplished through a median sternotomy and with the aid of extracorporeal circulation. (Figure 1) If the patient has unstable hemodynamics, bypass can be instituted prior to sternotomy using the femoral vessels, and the entire operation performed without shifting the cannulae.

Thrombus is carefully removed, and the left ventricular scar is excised. (Figure 2) In this illustration there is also a ventricular septal defect located in the usual anterior position near the apex. This should be closed either with a patch or heavy mattress sutures passed through pledgets of teflon felt because of the relatively high incidence of recurrence when other techniques are used.

The PA chest x-ray often suggests the presence of a left ventricular aneurysm, but diagnosis should be confirmed by left ventricular angiography. Postoperative chest x-rays usually show considerable reduction in the cardiac

silhouette, but some cardiomegaly often remains. Nevertheless, there is almost always improvement in hemodynamics following resection of a large left ventricular aneurysm. Table 2 shows the hemodynamics of a patient who developed angina and shortness of breath with mild exercise. Three weeks postoperatively, his cardiac index had increased nearly 50 per cent at rest, and four months postoperatively, he was able to exercise vigorously without any symptoms.

Recently, excision of left ventricular aneurysm has been combined with vein bypass grafts whenever significant obstructive lesions have been found in the coronary arteries, and the anatomy is suitable. Table 3 shows the operative and late mortality for 12 patients who underwent resection of left ventricular aneurysm alone and for 17 patients who underwent aneurysmectomy combined with vein bypass grafting. All but two patients were in class III or IV, and most had intractable congestive heart failure. The initial operative mortality has remained the same, but the late mortality for a similar follow-up interval is less in those patients who received vein grafts. All the mortality in the recent group was related to in-

**Table 1**  
SURGICAL COMPLICATIONS OF MYOCARDIAL INFARCTION

Complication	Surgical Treatment
Thromboembolism	Embolectomy
Pericardial effusion/cardiac tamponade	Pericardiocentesis/pericardiectomy
Permanent complete heart block	Pacemaker
Left ventricular rupture	Repair (CPB)
Left ventricular aneurysm	Aneurysmectomy (CPB)
Ventricular Septal defect	Closure (CPB)
Mitral insufficiency	Repair/Replacement mitral valve (CPB)
Intractable ventricular flutter/fibrillation	Revascularization/infarctectomy (CPB)
Intractable angina	Revascularization (CPB)
Shock	Assisted circulation/revascularization (CPB)

†Paper presented at the KMA Annual Meeting, September 20, 1972, in Louisville

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complete myocardial revascularization.

Table 4 shows the functional status of the patients before and following operation.

The situation is much less clear in the case of akinetic areas of the left ventricle. Resected specimens have a normal or only slightly reduced thickness, and histologically they show fibrous tissue interspersed with islands of hypertrophied muscle. Originally, we resected all akinetic areas if they failed to contract after myocardial revascularization. In general, our experience has shown that resection of these areas did not improve the operative mortality or postoperative results. Possibly, removing the collateral pathways was deleterious. In any event, only full thickness scar or definite aneurysms are resected at the present time.

We have employed acute infarctectomy in only a few instances. One patient was a 35-year-old engineer who had a silent and unrecognized myocardial infarction. His only difficulty was multiple systemic emboli which continued despite anticoagulation. The left ventriculogram suggested an aneurysm, but at operation an acute infarct, approximately 10 to 14 days old, was encountered. The resected specimen included necrotic muscle and large amounts of fresh thrombus. The patient also

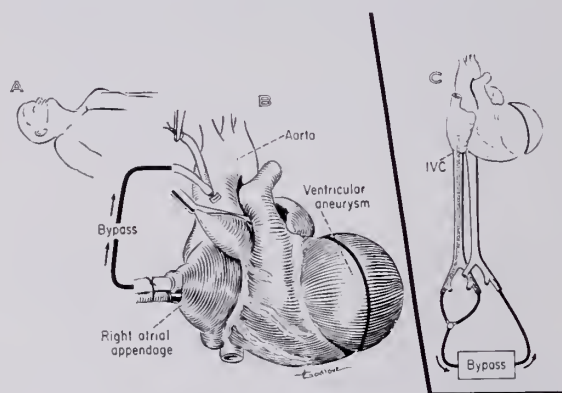


FIG. 1 Post-infarction ventricular aneurysm and ventricular septal defect. The heart is approached through a median sternotomy, A, and cannulation is performed through the right atrium and ascending aorta, B. If the pericardium is tightly adherent to the aneurysm, it is not disturbed until cardiopulmonary bypass is begun. The aorta is temporarily cross-clamped and the aneurysm is incised along its entire length. C, If the patient is hemodynamically unstable, cannulation may be performed through both femoral veins and the femoral artery under local anesthesia. If a precipitous drop in blood pressure or cardiac arrest should appear with induction of general anesthesia or thoractomy, bypass may be instituted immediately and the remaining dissection performed under controlled conditions. In most instances, the entire bypass can then be conducted through the peripheral cannulation.

Table 2

59-YEAR-OLD MALE WITH VENTRICULAR ANEURYSM

Hemodynamic Data	Cardiac Index	
	Rest	Exercise
1. Preoperative	2.8	3.2*
2. Three weeks postoperatively	4.0	
3. Four months postoperatively	4.4	5.5

\*The patient developed retrosternal tightness, shortness of breath, and sweating.

received a right saphenous vein bypass graft and had an uneventful convalescence.

In another patient, an acute myocardial infarction was sustained during operation for aortic valve replacement. Resection of the infarcted area and reconstruction of left ventricle was successfully accomplished. In our limited experience and that of others, infarctectomy has been beneficial if the main problem is intractable ventricular fibrillation. In such circumstances, the heart can usually be defibrillated following resection of the infarct. On the other hand, if the problem is one of pump failure, infarctectomy has not generally improved hemodynamics.

There has been increasing experience in the treatment of post-infarction ventricular septal defect. As in the case of left ventricular aneurysm, a median sternotomy is the preferred incision. The ventricular septal defect is approached through an incision in the infarcted area of the left ventricle. Sixteen patients have undergone closure of post-infarction ventricular septal defect at the Mayo Clinic, with three early deaths. Seven of these 16 patients had a concomitant resection of ventricular aneurysm, with six survivors. The sole nonsurvivor did well from a cardiac standpoint, but died of complications of pulmonary emboli. There were four late deaths in the 16 patients, due to additional complications of coronary artery disease. It is hoped that the incidence of late death will be reduced as a result of our current policy of placing vein bypass grafts into diseased coro-

Table 3

VENTRICULAR ANEURYSM

Surgical Results	No. of Patients	No. of deaths	
		Early	Late
Aneurysmectomy			
Alone	12	2	5
With vein grafts	17	3*	1*

\*All 4 deaths were of patients with triple-vessel disease in whom only 1 vessel was grafted.



nary vessels whenever the anatomy is suitable.

Mitral insufficiency following myocardial infarction may result from papillary muscle dysfunction or rupture, ruptured chordae tendineae, or dilation of the left ventricle. Repair of the mitral valve is usually best accomplished by prosthetic replacement, but suitable cases of ruptured chordae of the mural leaflet of the mitral valve can be satisfactorily repaired by plication of the involved portion of leaflet and eccentric posterior annuloplasty. In our experience, mitral valve replacement is often combined with resection of ventricular aneurysm, vein bypass grafting, or both. The comment is often made that, following resection of large areas of left ventricle, one must be concerned about producing a left ventricular cavity that is too small, particularly when a ball valve prosthesis is inserted. We have not encountered this problem in any of our cases.

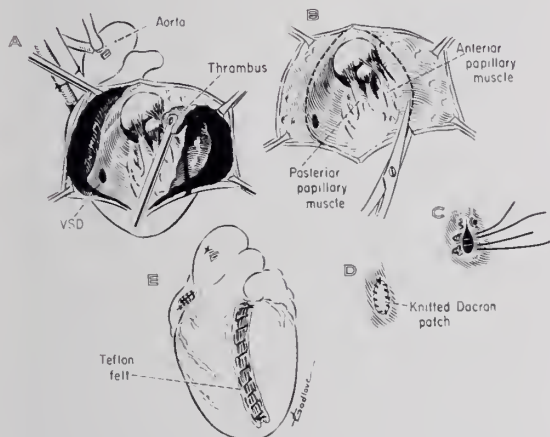


FIG. 2 A, Thrombus is carefully removed, and the endocardial surface is wiped clean with gauze sponges. B, The aneurysm sac is excised; a 1 cm. margin is left. The ventricular septal defect in the anterior inferior portion of the septum may be closed by interrupted horizontal mattress sutures passed through Teflon felt pledgets, C, or by a prosthetic patch, D. E, The ventriculotomy is closed with a continuous horizontal mattress suture backed with an over-and-over suture. The sutures may be passed through strips of Teflon felt for additional strength of closure.

Table 5 gives the operative mortality for post-infarction mitral insufficiency. Although the figures remain relatively high, some survivors are markedly benefited, so operation is offered to selected patients in this "salvage" group. As in the case of post-infarction ventricular septal defect, it is hoped that the incidence of late death will be reduced by vein bypass grafting.

One of the more exciting developments in the field of myocardial revascularization has

Table 4

#### VENTRICULAR ANEURYSMECTOMY AND VEIN BYPASS GRAFT

Class	Functional Status	
	No. of patients	
	Preoperative	Postoperative
I	0	7
II	2	3
III	10	1
IV	5	1

been the emergency treatment of acute coronary insufficiency. From September, 1970, to December of last year, 14 Mayo Clinic patients underwent emergency surgery for acute life-threatening coronary insufficiency. The patients fell into two groups. Group I included five patients who developed severe myocardial ischemia during coronary arteriography. Group 2 consisted of four patients with severe angina and recurrent ventricular fibrillation refractory to medical management, and an additional five patients who presented with angina of greater than three hours' duration accompanied by electrocardiographic signs of ischemia.

An example of a patient in Group 1 is a man who was shown to have a severe segmental stenosis in the right coronary artery. After the injection of contrast material was made, the patient complained of severe chest pain, and a repeat injection now showed complete occlusion of the artery in the area of prior stenosis. The patient was taken directly to the operating room and a right coronary artery vein bypass graft was inserted. Postoperatively, the graft was patent, and the patient had no further pain.

Figure 3 shows the electrocardiogram from a patient in Group 2 who had severe coronary artery disease and aortic stenosis. With the onset of pain, the QRS complex widened, the ST segment was depressed, and ventricular tachycardia developed. After nitroglycerin the pain subsided and the electrocardiogram reverted to a pre-pain configuration. This pattern was re-

Table 5

#### POST-INFARCTION MITRAL VALVE DISEASE

	Results of Surgery		
	No. of patients	No. of deaths	
		Early	Late
Mitral valve only	11	3	4
Mitral valve and Saphenous vein graft	9	3	1

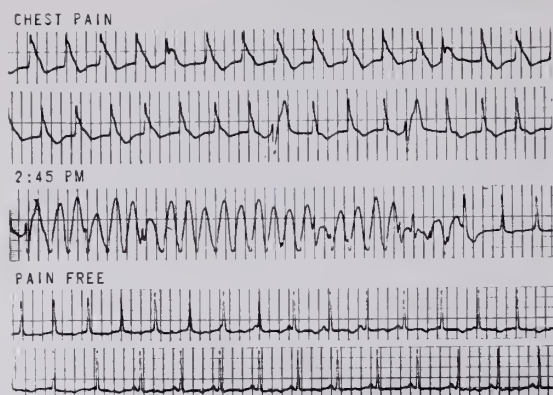


FIG. 3 The electrocardiogram from a patient who had severe coronary artery disease and aortic stenosis. With the onset of angina, the QRS complex widened, the ST segment was depressed, and ventricular tachycardia developed. After nitroglycerin, the pain subsided and the electrocardiogram reverted to the pre-pain configuration.

peated many times, and the patient required defibrillation on several occasions.

The patient was successfully operated upon, and the postoperative angiogram demonstrated the aortic valve in place and a patent vein graft to the anterior descending coronary artery. The patient had no further episodes of pain or ventricular tachycardia.

Table 6

EMERGENCY MYOCARDIAL REVASCULARIZATION  
Number and Location of Saphenous Grafts

Grafts	LAD	Right	CX	Total cases
Single	6	1	0	7
Double	4	2	4	5
Triple	2	2	2	2
<b>TOTAL</b>	<b>12</b>	<b>5</b>	<b>6</b>	<b>23/14</b>
M flow, ml/mm	88 (8 cases)	85 (1 case)	40 (3 cases)	

Table 6 shows the number and location of the saphenous vein grafts. The left anterior descending was the artery most often grafted.

Table 7 shows the operative results. There was one fatality, a patient who sustained a cardiac arrest and was being maintained by closed chest cardiac massage until he was connected to the pump oxygenator. Although a triple saphenous vein graft was done, myocardial contractions were still inadequate at

the termination of bypass. In the other 13 patients, the electrocardiogram either reverted to normal or showed reduced T-wave changes. The ventricular dysrhythmias present in four patients preoperatively did not recur after operation. Nine of ten grafts studied postoperatively were patent.

Table 7

EMERGENCY MYOCARDIAL REVASCULARIZATION

Early Results	
Mortality	1/14 (7%)
Improvement	
Clinical	13/13
Electrocardiographic (absence of infarction or dysrhythmia; decreased ischemia)	13/13
Findings of restudy	
Graft status	
Patent	9
Not visualized	1

One of the patients in this series has subsequently undergone a second emergency procedure. He had done well for over one year following emergency vein grafting to the left anterior descending coronary artery and returned for re-evaluation. Following coronary arteriography, he developed severe chest pain accompanied by electrocardiographic changes of ischemia. The study suggested occlusion of the distal anastomosis of his graft. At operation, a thrombus was found which was acting as a ball valve. The area of proximal stenosis in the coronary artery had progressed to total occlusion, and a thrombus had propagated down the artery to the level of the anastomosis. The thrombus was removed and a successful repair was made. The patient continues to do well over one year after his second emergency operation.

In summary then, we can say that surgical therapy is beneficial for a number of complications of myocardial infarction, and the current trend is to combine the procedure (left ventricular aneurysmectomy, valve replacement, etc.) with aortocoronary saphenous vein bypass grafts whenever residual coronary artery occlusive disease is present.





# GRAND ROUNDS



The University of Louisville School of Medicine

This Journal feature will be presented alternately by the University of Louisville and the University of Kentucky Departments of Medicine and Departments of Surgery. We hope to have these features revolve around subjects of immediate practical interest to the practicing physician; and, for those of us not able to attend grand rounds in the teaching centers as often as we might, we hope this will represent a bit of a refresher course.

## Surgical Considerations in the Management of Hiatal Hernia and Esophagitis

**T**HREE patients demonstrate many of the considerations appropriate for the surgeon who is asked to see a patient with hiatal hernia.

First is a 53-year-old woman who is somewhat overweight but otherwise healthy. She has had heartburn as a moderately significant symptom since the late stages of her second pregnancy 30 years before. Within the last three years her retrosternal pain has become progressively more symptomatic and similarly less responsive to medical management. Antacids, dietary restrictions, attempts to lose weight and elevation of the head of the bed have all been ineffective. Initial hospital evaluations showed a small sliding hiatal hernia with free reflux of contrast material into the distal esophagus. No ulceration was seen in the esophagus. No stenosis and no gastric or duodenal ulcer were seen. The barium enema was normal as was an oral cholecystogram. Esophagoscopy showed moderately severe esophagitis without evidence of stenosis. A biopsy was not done. A study of gastric acidity was in the normal range for the test employed.

The second patient presented with complaints of dysphagia for solid food. He had experienced substernal burning pain intermittently; this had been responsive to antacid mints for a long period. Previous evaluations of these complaints had shown a hiatal hernia, but no specific management had been recommended. At that time x-ray examination showed the absence of duodenal ulcer, gastric ulcer, cholelithiasis, or other significant intra-abdominal diseases. Examination showed an entirely well individual with no evidence of

weight loss. Further hospital evaluation showed a longitudinal esophageal stenosis with some apparent shortening and a moderate-sized sliding hiatal hernia.

The third patient presented with a massive hiatal hernia demonstrated radiographically, with most of the stomach herniated into the posterior mediastinum but with minimal reflux. The stomach itself appeared to contain no ulcers, and no other abnormalities were detected in a thorough evaluation, including an electrocardiogram. The patient's complaints were tightness in and around the heart and some occasional difficulties with breathing. These were more marked after meals. While these symptoms had been getting steadily worse over a substantial period, this particular patient indicated that they had been accentuated by a recent accident.

### Pathophysiology

Our first consideration is to stress the importance of the hernia's physiologic relationships and to de-emphasize the anatomic abnormality. Hiatal hernias of one sort or another exist in a substantial portion of the population. The majority of these do not cause symptoms. Most of those which do cause symptoms are apparently managed rather well by non-operative methods of therapy, which should properly include the reasonable use of antacid, elevation of the head of the bed, small meals and a program of weight loss, if this is a predisposing factor because of increased intra-abdominal pressure. While it appears that relatively few patients of all those with hiatal hernia genuinely require operation, those

patients who would properly benefit from operation must be identified (Table 1).

The important physiologic relationship is not the presence of the hernia in the chest, although the third patient is an example of such, but a displacement of the esophagogastric junction into a position where it is no longer normally competent to prevent gastroesophageal reflux. As a result, gastric acid, which is typically normal in concentration and volume, refluxes into distal esophagus. The distal esophagus is very slightly resistant to such reflux, and such sensitivity may be accentuated if the acid clearing mechanism is impaired. Hiatal hernia, therefore, is an anatomic defect, but the disease which causes these patients to see a physician, our third patient notwithstanding, is esophagitis and/or its complications.

**Table 1**

**Indications for Operation in Patients with Hiatal Hernia**

<b>Failure of medical care</b>
Persistence of heartburn
Development of dysphagia (stenosis)
<b>Bleeding</b>
Most commonly from an ulcer in the herniated stomach
<b>Presence of longitudinal (stricture) or circumferential (Schatzki ring) stenosis</b>
<b>Retrosternal pressure symptoms only if hernia is large</b>
<b>Documented pulmonary aspiration</b>

### Coexisting Illnesses

Coexisting diseases are frequent in patients with hiatal hernia (Table 2). It is not regularly possible to distinguish among such illnesses and complete x-ray evaluation is essential. Clearly esophagitis will not respond symptomatically to cholecystectomy for cholelithiasis, or vice versa. This is often a major diagnostic problem, and we often employ esophagoscopy to confirm the diagnosis of esophagitis objectively.

### Previous Surgical Failures

It is appropriate to remind surgeons that this operation has acquired a bad name both with patients and many of our colleagues in related specialties. This is attributable to two major factors. First, a large number of patients were operated upon for hiatal hernia who had no symptoms and obviously could not be improved by their operation. Second, a substantial number of patients undergoing operation have

**Table 2**

**Minimum Frequency of Abnormalities Associated with Hiatal Hernia**

<b>Cholelithiasis</b>	<b>33%</b>
<b>Duodenal ulcer</b>	<b>24%</b>
<b>Colonic disease (sufficient to require operation)</b>	<b>7%</b>
<b>Gastric ulcer</b>	<b>5%</b>
<b>Angina pectoris</b>	<b>3%</b>
<b>No other abnormalities</b>	<b>60%</b>

failed to benefit from the procedure because of an anatomic recurrence and/or a physiologic failure. These unsatisfactory results have been reported by several centers to exceed 25% in five years.

### New Concepts

A new interest in hiatal hernia and esophagitis as a surgical illness was no doubt stimulated by the studies of Belsey and Nissen<sup>1</sup>, who almost simultaneously and independently realized that simple approximation of the crura of the diaphragm behind the esophagus and reattachment of the tenuous phreno-esophageal ligament to the undersurface of the diaphragm was extremely unlikely to control mechanical or physiologic defects of this sort. Accordingly, both of them developed a "valvuloplasty" type of procedure in which, among other things, an acute angle at the esophagogastric junction is accentuated to permit caudad passage of ingested material but to generally retard cephalad regurgitation of gastric contents, whether food or acid. These operations have brought a new order of success to the surgical approach to hiatal hernia, and most individuals with modest experience in either procedure report anatomic and physiologic success which exceed 90%, even in patients who have been scrupulously studied for postoperative failure. Also, these procedures can apparently be conducted with reasonable morbidity and a mortality rate acceptable for a benign disease (Table 3).

Much has been made of whether the trans-abdominal or trans-thoracic route was superior for repair. While it is important to favor that

<sup>1</sup>Skinner, D. B., Belsey, R. H. R., Hendrix, T. R., Zuidema, G. D. *Gastroesophageal Reflux and Hiatal Hernia*, Little, Brown and Company, Boston, 1972.



route most familiar to the operating surgeon, it may well be that patients should be studied in some detail to identify which ones would benefit from a trans-thoracic operation and which from a trans-abdominal operation. The patient with coexistent gallstones would probably do better with one abdominal operation to correct his cholelithiasis, chronic cholecystitis, and hiatal hernia than with two sequential procedures. Similarly, we feel quite strongly that those patients with either very large hernias or with evidence of esophageal shortening or stenosis benefit from a trans-thoracic operation, as an example.

### Patient Decisions

Now consider the patients presented. The first patient is a fairly typical example of the patient with an isolated hiatal hernia which is often related to pregnancy. At this point, the first patient's esophagitis is becoming more recalcitrant to medical treatment, and she is unlikely to obtain lasting relief. For this patient we would recommend a hiatal herniorrhaphy with reconstruction of a valvular mechanism, such as has been described by Nissen. The operative approach carried out in this patient should very likely be of the surgeon's choosing. As we have indicated previously, should this patient have clear cut signs of intra-abdominal disease verified by x-ray study of abdominal organs, we would opt for the trans-abdominal approach (Table 1). Were esophageal shortening a factor, we would recommend the trans-thoracic approach.

### The Approach to Stricture

The second patient made relatively little of his probably significant esophagitis over the years. He may well be stoic, because at this point he presents with a complication of uncontrolled esophagitis, i.e., longitudinal stenosis or stricture of the distal esophagus. In the past, firm fibrous strictures were treated by extensive operations, such as interposition of segments of intestine (Merendino). Such procedures prove remarkably effective but bear a substantial mortality rate even in skilled hands. Such strictures have been treated by incision and the use of gastric fundus as a serosal onlay graft (Thal). Actually, this patient probably should be treated by an op-

eration designed to control reflux, with either digital dilatation through a gastrotomy or endoscopic dilatation at the time of operation. While this can be accomplished trans-abdominally, unless other factors were clinically significant, we would prefer to approach this through the left chest. After correction of the reflux and dilatation of a soft, edematous, non-fibrotic stricture, such patients obtain a satisfactory long-term result. If the stenosis is firm or hard and unyielding, interposition or onlay grafting supplemented by valvuloplasty, will often be necessary.

Table 3

Results of Treatment of Hiatal Hernia and Esophagitis by Fundoplication (Nissen) \*

	No.	%
Patients operated upon (1.2% of hiatal hernias discovered)	121	100.0
Results		
Died after operation	2	1.6
Complications prolonging hospitalization	19	15.7
Anatomic or physiologic failure	3	2.4
Recurrence of symptoms	4	3.2
Well and free of complaints	112	92.7

\*Based in part upon previous reports (Ann. Thor. Surg. 7:202, 1969, Ann Surg. 173:775, 1971).

### Conclusions

Cautious optimism is perhaps the watchword as one waits to see whether these concepts stand the test of time. Is the patient selection (for operation) appropriate? Have we swung too far to the right and excluded legitimate operative candidates as a reactionary response to previous standards, where hiatal hernias were often operated upon much as mountains were climbed—because they were there?

What is the role of the once popular multifaceted or balanced operations for hiatal hernia? We think there is none, because patients without associated peptic ulcer have normal gastric acidity, requiring no operative maneuver to control same, and preoperative x-rays turn up virtually all significant lesions discoverable by exploration.

Can we keep to a minimum the complications of procedures designed to produce a valve at the gastroesophageal junction? Some reports have described significant bloating after operations of this sort. We have encountered few such complaints, but this may

be attributable to the relative looseness with which the fundus is wrapped about the intra-abdominal esophagus in the Nissen procedure.

Will the early good results be maintained? Both Belsey and Nissen have had in excess of 20 years' experience with such operations. They report that failures tend to appear soon—virtually all within the first two years—and that once control of reflux and esophagitis is obtained, it usually remains controlled.

This discussion of recent apparent advances

in the care, treatment and, indeed, understanding of hiatal hernia and reflux esophagitis has been concerned with multiple factors, and the interested reader may well wish to consult a recent monograph on this subject.

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## KMA Annual Meeting Moves To New Location For 1973 Session

**Ramada Inn — Bluegrass Convention Center**

**September 18-20**



## SPECIAL ARTICLES

### Congress' Continuing View of Health Care †

M. GENE SNYDER\*

IT'S a real pleasure to be here tonight. I mean that. I mean it because as I gaze out over this audience tonight I see folks who have been among my staunchest, firmest, most generous and consistent supporters . . . in short, they have been my personal friends and my ideological compatriots.

The fact that I feel at home among you is not likely to change. Besides, it has always impressed me that all you prestigious doctors would invite a country lawyer and hard-working real estate broker to address you. I'm like the mule in the Kentucky Derby—I'm out-classed, but I sure appreciate the company.

I am confident that we will always be allies because we share certain fundamental principles. As a pundit once remarked: "Our principles are the springs of our actions; our actions, the springs of our happiness or misery. Too much care, therefore, cannot be taken in forming our principles."

The principles we share have led us into some pretty hard-fought actions in the past. Together we have battled on a number of fronts and I have no doubt that the future will see us fighting together in the struggles that inevitably face us as men—that challenge our principles—that threaten the honor of our country.

I know what many of you are thinking right now. You're saying to yourselves that Snyder is going to use this opportunity to make another scathing attack on socialized medicine and on the many current proposals designed to achieve that ignominious end.

Well, I'm not going to do exactly that. I know that many so-called "National Health Insurance" plans are being set forth by the

Hero of Chappaquiddick and other do-gooders. But each of you knows the objections to such plans; each of you knows why it won't work; and each of you believes, with Albert Jay Kock, that the best thing to do if you see someone coming to your door intent on doing you good is to hide under the bed. Besides, if we had any British doctors here tonight they would probably tell you they came to the States because they got tired of having to treat every ailment that crawls out of the diagnostic woodwork, from hangnail to pink elephantiastis.

What I do want to talk about tonight is the broad, general concept under which such proposals as socialized medicine ought to be considered. What I mean specifically is the role of government in all the spheres of human endeavor. We, in America, have always had certain beliefs about how far the government can or should go short of being tyrannical. Today, we face, *not* dictatorship of one man, as some of our adversaries say, but a collective dictatorship of bureaucrats who have an insatiable thirst for controlling every facet of American life—from cradle to grave, from office to kitchen, from the highways to the bedroom. That great philosopher, George Santayana, said it well when he commented that "A man may not always eat and drink what is good for him; but it is better to die of the gout freely than to have a censor officially appointed over his diet, who after all could not render him immortal anyway."

This, I believe, is essentially the spirit which motivates President Nixon in his current drive for economy in government.

Government went hogwild in the 1960's. It went hogwild and haywire. Most Americans, I hope, have learned that government usually messes up most areas it gets into. The only way bureaucrats can cut red tape is lengthwise.

†Presented at the KMA Interim Meeting, March 29, 1973, at Lake Barkley State Resort Park in Cadiz

\*Member, U.S. House of Representatives, from the 4th Congressional District, Kentucky

The President has said that he wants “not *more* government . . . but *better* government.” And when we look at the increase in government spending, we can see that he very definitely has a point.

Since our nation began, Federal spending totals a staggering 3 trillion, 543 billion dollars—and today it is hardly surprising that the taxpayers are up in arms and demanding to know where we intend to go from here.

Let's examine the history of Federal spending a little more closely. Since 1790, here's how it looks: up until 1900 (in other words, for the first 111 years of the Republic) we spent some \$16.5 billion. Up to 1940 (or in the next 40 years from 1900) the government spent \$150 billion; then up to 1950, \$535 billion and \$744 billion in the next 10 years up to 1960; \$553 billion in the next five years (i.e. 1960 to 1965) and \$850 billion in the next five years up to 1970 and \$695 billion in the three years since 1970!

In 1901, the U. S. had 77 million people and spent \$7 per capita. Today we are spending \$1,110 per capita—158 times as much—although our population has only tripled since the turn of the century.

And when we look around us in America, has all this government-spent money solved the great problems of humanity? On the contrary, while it may have helped some in a few areas, it has almost universally given birth to many more problems. Injections of Federal money have become like injections of fertility drugs . . . you try to get a baby and you end up with a litter.

If we don't put some kind of restraint into practice, spending over the next three years could hit \$900 billion, or a fourth of all previous spending in our history!

Yet, the first modest suggestion of cutbacks in Federal program expansion has brought forth howls of outrage and aggressive efforts to force still more spending. At issue here, ladies and gentlemen, is the question of priorities. There is, as you all know, a fight going on over who should establish them. Some of my colleagues in Congress avow that President Nixon has grabbed budgetary power away from the legislative body.

Isn't it strange that when Congress fails to appropriate money which the Administration feels is necessary, it is called the system of

“checks and balances”; but when the Executive refuses to spend money which it feels the Congress has wrongfully appropriated, it is called “dictatorship”?

The truth is, as we look at next year's budget, the one for fiscal 1974, we see that Congress pretty well mapped out the priorities a long time ago. Some \$205 billion is committed to past programs, all enacted by Congress. These items are uncuttable. That leaves less than 25% of the budget to play around with—to make savings or change priorities. One huge item that would build a lot of schools and hospitals and such is the \$26 billion in interest we are paying for past budgetary excesses.

Outside of the Constitutional question, which may be settled in the courts, the Executive-Legislative hassle boils down to who is going to take on the responsibility of saying “no” to the insatiable demands for Federal programs to go ever onward and skyward.

Let me say quite frankly that a lot of the hot air you hear coming out of the halls of Congress these days about “reassertion of Congressional prerogatives” is just that—hot air. Many members of Congress, the majority leadership included, have for many years had their cake and their eating it too. They've been able to stand up and say to every interest group, every income group and every visitor to their offices, “See, we gave you everything you wanted. It's that nasty old White House that won't spend it.”

This is a convenient way to get off the hook—but it's not healthy for the country. And for these same fiscal mountebanks to get up on their high horses now is political opportunism at its very worst. Chairman Wilbur Mills of the House Ways and Means Committee stated it reasonably when he said that “since the time of Jefferson, presidents have reserved on the expenditure of funds. The President is not going to use authority to hold back spending indiscriminately and he certainly will not use this authority in such a way as to endanger his party's chances to win after the next four years. If we want to stop runaway expenditures, we must not only provide a spending ceiling but also give the President enough leeway in determining which expenditures can be reserved, so he can do the job.



That is our only alternative.”

A perfect illustration both of Congressional irresponsibility and the need for the alternative which Chairman Mills suggests is an exchange which appeared in the *Congressional Record* of October 18, 1972, involving Mr. Mills himself. In that exchange, Chairman Mills reported that the Senate-House conference committee had agreed on a compromise on a bill to put a \$250 billion ceiling on spending. However, the Chairman reported, even though the Senate had called for a ceiling, it had refused to give the President any powers to implement the ceiling. The House had given the President this power.

The compromise was this: the President could make vetoes of appropriations to bring spending under \$250 billion—but, he only had the power to do so for one day. Furthermore, any actions he took during that one day were null and void. If the foregoing is what is meant by “Congressional responsibility,” then God save us from anyone asserting it.

That is the way the history of government spending has gone. We see that we will probably run a \$25 billion deficit in fiscal 1973. Due to changes in tax laws enacted in 1969 and 1971, plus growth of the economy, revenues will be up to \$256 billion in 1974, with a \$13 billion deficit.

The President is aiming at a balanced budget over the next few years, but the Congress and the people must cooperate in achieving that goal. The people of the Fourth Congressional District, when they were asked whether, to cut overall Federal spending, they would accept cuts in their favorite Federal programs, responded by an overwhelming 85.6% to 12.8% that they would.

I hope this message gets to my colleagues in Congress because at stake is whether or not our dollars will buy anything in a decade or so, for the path of inflation runs parallel to the path of upward Federal “printing press” money spent in the form of deficits.

It is clear that what we need is not additional astronomically-priced programs like socialized medicine even if there was the remotest chance it would work (which there isn't). Rather, we must have cuts in the wasteful and wild-eyed programs we're already burdened with.

This is not the time to embark on further flights of fancy. Today we face a great decision.

We can reaffirm our belief in the sovereignty of the individual and the desirability of freedom and liberty, or we can plunge headlong down the road to all-encompassing governmental control and national extinction.

I know which alternative you will choose and have chosen. And I am confident which way most Americans will choose if we provide them with the leadership. We are, I feel, emerging from a time of great national doubt and confusion.

Think of this: If 10 years is the age at which public events begin to register on children, some 40% of all Americans can't remember when the U. S. wasn't in Vietnam. Also, practically every American man between the ages of 19 and 76 has had the threat of the draft over him at some time since the start of World War II. Every family has been touched in some way.

This has changed now. There is still a vigorous spirit alive in America and it is emerging and stirring from the stupor we thought it was in just a short time ago. Sure, we have a lot of problems—but we have solved problems just as big in the past. The world admires us for our character as a nation.

We have acted with restraint which befits a super-power in this age of super-power. But we cannot rest on these laurels. The act of earning respect in this world is ceaseless. Just as a doctor can't rest on a feat of surgery or diagnosis he performed 20 years ago, a great nation cannot rest on what it did yesterday if it lets things go to hell today. And things will go to hell if our government continues irresponsible spending and profligate programs.

So, starting today, let us reaffirm our principles, the principles of freedom and self-initiative which have made us a great people, a mighty nation. Let us base our actions on those principles—actions to reject the temptations to national weakness. Let us face the question of how we shall answer the decisive challenge which confronts our nation today. As I said before, I know what your answer has been and what it will continue to be.

Thank you.



## EDITORIALS



### The Trover Clinic

**I**N 1953, in Madisonville, Kentucky—population then about 11,000—there were 10 physicians. In that year and in that town, Doctors Loman and Faull Trover, graduates of the University of Louisville School of Medicine, embarked upon the formation of a multi-specialty group practice. Now, just 20 years later, it seems appropriate to review the development and some of the accomplishments of the Trover Clinic, for it has come to be a unique, regional medical institution, indeed.

In 1973, the Clinic has 56 physician-members, representing all the major and most of the sub-specialties. The Hopkins County Hospital has grown from 54 beds at the time of its founding in 1937 to 300 beds now with coronary care, intensive care, and all the modern laboratory and other ancillary services normally found in an urban medical center. Satellite clinics, bringing the advantages of the center to patients in the periphery, have been established in Earlington (1954), Providence (1960), and Morganfield (1972). A Clinic Convalescent Center, established in 1962, has grown to 70 beds capacity. Doctor Loman Trover, who serves as Medical Director of the Clinic, has been a recent member of the Council on Professional Services for the American Hospital Association, and is this year President-Elect of the prestigious American Association of Medical Clinics. The record of Clinic growth is intrinsically extremely impressive, as noted above, but what makes this historical review really educational, and what sets this group practice effort apart, is a further study of the very close relationship that has developed between the Clinic and the community it serves.

Over the years since its founding, the Clinic has stimulated in and around Hopkins County a number of health-oriented programs, and has affiliated with many more. The Clinic Foundation has financed medical student housing,

scholarship loans, and the start of a Family Practice Residency. The Clinic itself has helped train students in Community Medicine from the University of Kentucky Medical School, has helped the Madisonville Community College train R.N.s, and has worked with the Hopkins County Health Department screening programs, the Pennyrile Comprehensive Health Planning Council, the Pennyrile Mental Health Center, Pennyrile Crime Council, Community Action Agency, etc. In 1971, the Clinic was instrumental in organizing a Health Occupations School, now training L.P.N.s, lab techs, x-ray techs, inhalation therapists, and medical secretaries. In the last five years, Goodyear, General Electric, McGraw Edison, National Can, and Borg-Warner have all located manufacturing plants nearby; good health care for employees of these plants was certainly considered carefully in site-selection.

The economic background of this group has been fee-for-service since its origin, and under such a plan it has certainly prospered. Not only has the Clinic itself prospered, but it has brought both excellent medical care and the fiscal benefits of a large medical center to Hopkins County. Administrative breadth of vision, looking beyond individual illnesses toward the health of the community as a whole, must account in large measure for such an impressive acceptance of a group practice concept in Madisonville.

No brief is made, by the clinic or by this writer, that group practice is the only, or the best, way to practice medicine. It has its own set of problems, of course. But it is a way to practice, and, given the same intelligent effort most physicians devote to their labors of any sort, it can obviously produce a quality of medical care, and community progress, worthy of our close attention.

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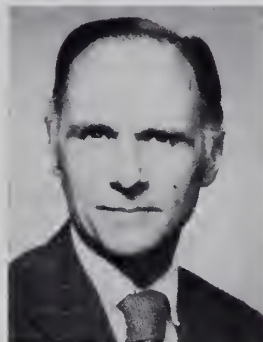


## ORGANIZATION SECTION



### 1973 KMA Annual Meeting Being Held 1st Time At Louisville Ramada Inn/Bluegrass Center

The 1973 KMA Annual Meeting will, for the first time, be held at the Ramada Inn/Bluegrass Convention Center in Louisville.



Doctor Helfer

The annual session, to be held September 18-20, will feature an outstanding scientific program and many prominent guest speakers are scheduled to participate, Lee C. Hess, M.D., Florence, KMA President, announced.

The KMA Scientific Program Committee has designed the program so that every medical specialty will be involved. Guests of the Association, specialty group speakers and many local physicians have been invited to discuss a wide range of medical subjects during the four general sessions and 17 specialty sessions.

Various themes for the general session presentations include "Critical Care Medicine," "Pollution," "Renal Problems" and "Sex and Its Consequences."

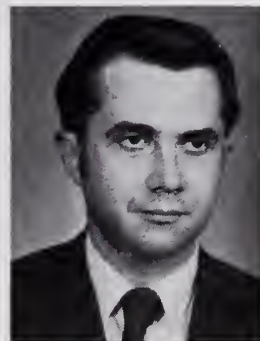
Speaking to the topic "Critical Care Medicine" during the September 18 morning session will be Ray Helfer, M.D., East Lansing, Mich.; Hubert J. Van Peenen, M.D., Houston, Tex., and Don M. Benson, M.D., Pittsburgh, Pa.

"The Battered Child Syndrome" will be discussed by Doctor Helfer, who is Associate Professor, Department of Human Development, Michigan State University. A member of the American Academy of Pediatrics, Doctor Helfer has been President of the Ambulatory Pediatric Association during 1972-73.

Doctor Van Peenen will deal with the subject



Doctor Van Peenen



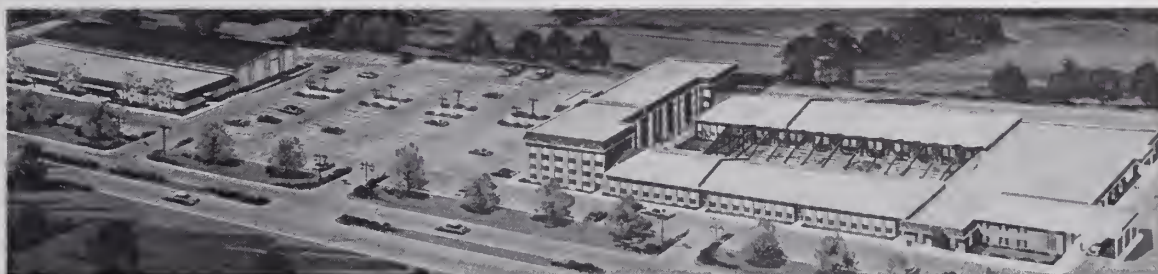
Doctor Benson

"Laboratory Utilization Patterns in Critical Care Medicine." Professor and Chairman, Department of Pathology at the University of Texas Medical School at Houston, Doctor Van Peenen is a member of the Academic Clinical Laboratory Physicians and Scientists and the American Society of Clinical Pathologists.

Active in the field of emergency medical care, Doctor Benson is a member of the Cardiopulmonary Resuscitation and Emergency Care Committee of the American Heart Association and belongs to the Society of Critical Care Medicine. Assistant Professor of Anesthesiology at the University of Pittsburgh School of Medicine, Doctor Benson will speak on "Critical Care Medicine—Its Evolution and Present Status."

The American Medical Association has fully accredited the Annual Meeting for postgraduate continuing medical education.

The 1973 Annual Meeting will include meetings of the 17 specialty groups, two meetings of the KMA House of Delegates, the President's Luncheon, a wide



For the first time, the KMA Annual Meeting will be held at the Ramada Inn/Bluegrass Convention Center in Louisville, September 18-20, 1973. Located at Interstate 64 and Hurstbourne Lane, the Ramada Inn is convenient for shopping and for visiting recreational facilities in the Louisville area.

variety of technical and scientific exhibits, and the Annual Convention of the Woman's Auxiliary to KMA. All activities will be held at the Ramada Inn/Bluegrass Convention Center.

Upcoming issues of *The Journal* will carry further details on other speakers and highlights of this year's meeting.

## Trustees Schedule Annual Mtgs. In Nine KMA Districts

Nine of the 15 Trustee Districts of KMA have held or plan to hold annual meetings in April, May and June.

The Eighth District's meeting was held April 6-7 at Carter Caves State Park. April 12 was the meeting date for the Fourth District, held in Lebanon. The Second KMA District met at the Owensboro Country Club on April 24, followed by a meeting on April 25 of the First District in Paducah. The annual meeting of the Thirteenth KMA District was held May 1 at the Bellefonte Country Club in Ashland. A scientific program was the highlight of the meeting of the Fourteenth District held May 2 in Pikeville.

C. A. Hoffman, M.D., Huntington, W. Va., President of the American Medical Association, was the featured speaker at the annual meeting of the Tenth Trustee District held May 8 in Lexington.

Meetings of the Seventh and Third Districts are being planned. The Seventh District is scheduled to meet on May 24 in Frankfort, while June 12 is the date being planned for the Third District meeting in Hopkinsville.

Principal speakers for the Trustee District meetings have been Lee C. Hess, M.D., Florence, KMA President, and David A. Hull, M.D., Lexington, President of the Kentucky Foundation for Medical Care. Both physicians dealt with the topic "PSROs." Doctor Hess addressed the meetings of the Eighth, Fourth, First, Thirteenth and Fourteenth Districts. Doctor Hull spoke to the Second District and is scheduled to speak at the meetings of the Seventh and Third Districts.

## Drs. Surawicz, Westphal Awarded At 1973 Interim Meeting

Borys Surawicz, M.D., Lexington and Ulrich Westphal, Ph.D., Louisville, were presented the 1973 Faculty Scientific Achievement Awards at the Interim Meeting during the Thursday evening dinner session, March 29.

The Award, which is presented annually to a faculty member of each of Kentucky's medical schools, honors the recipient for having done outstanding research or for having made a considerable contribution to the field of medicine.

Doctor Surawicz is a Professor of Medicine and Director of the Cardiovascular Division of the University of Kentucky College of Medicine. A native of Moscow, Doctor Surawicz received the American



Fred C. Rainey, M.D., KMA President-Elect, (left) presents the Faculty Scientific Achievement Awards to Borys Surawicz, M.D. (center), Lexington, and Ulrich F. Westphal, Ph.D. (right), Louisville.

College of Cardiology Master Teacher Award in 1971. He came to the University of Kentucky in 1962 having previously been a research fellow of the American Heart Association and instructor in cardiology at the University of Pennsylvania School of Medicine. Doctor Surawicz is a trustee of the American College of Cardiology.

Professor of Bio-Chemistry at the University of Louisville School of Medicine, Doctor Westphal received his medical education in Austria and Germany. He was selected as "Outstanding Pre-Clinical Instructor for the Year 1969" at the University of Louisville and belongs to numerous medical organizations including the American Society of Biological Chemists, the Society for Experimental Biology and Medicine and the Bio-Chemistry Study Section of the National Institute of Health.

## Carl Cooper, M.D. Named Chairman of KEMPAC

Carl Cooper, Jr., M.D., Bedford, was recently elected Chairman of the Board of Directors of KEMPAC, following the resignation of Fred C. Rainey, M.D., Elizabethtown, in that position. Doctor Rainey's resignation came after he announced his candidacy for State Senator from the Tenth District.

The KEMPAC Board named Bennett L. Crowder, II, M.D., Hopkinsville, to fill Doctor Cooper's former position as assistant treasurer.

Doctor Cooper, a general practitioner, is Vice-Speaker of the KMA House of Delegates. He has served as an alternate delegate to AMA and former chairman of the KMA Senior Day Program Committee. Active in the Kentucky Chapter, American Academy of Family Physicians, Doctor Cooper is a Vice-President and Director of that organization.



## 1973 KMA Interim Meeting Highlights Presented

Physicians and guests who attended the 1973 KMA Interim Meeting were presented an outstanding and highly informative program during the two-day session. The meeting, which was held at Lake Barkley State Resort Park in Cadiz on March 29-30, featured addresses from top speakers from throughout the country and several Kentucky physicians.

A panel discussion on various approaches to health care delivery opened the Thursday morning session. Walter I. Hume, Jr., M.D., Louisville, moderated the panel which consisted of Leslie W. Blakely, M.D., Lexington; George F. Brockman, M.D., Greenville; McHenry S. Brewer, M.D., Louisville; W. Neville Caudill, M.D., Louisville, and Dan A. Martin, M.D., Madisonville. The Kentucky physicians directed themselves to the many different modes of delivering health care in Kentucky.

Tom Nesbitt, M.D., Nashville, Vice-Speaker of the AMA House of Delegates, presented AMA's views on health care delivery.

Also featured on the Thursday morning program were discussions concerning health manpower, health costs and health insurance. Joseph C. Hamburg, M.D., Dean of the College of Allied Health Professions, University of Kentucky; Lowell H. Steen, M.D., Hammond, Ind., AMA delegate from Indiana, and Harold B. McGuffey, Kentucky Commissioner of Insurance, were the respective speakers on the above topics.

Congressman M. Gene Snyder (R-Louisville) was the principal speaker at the dinner session on March 29. He discussed developments in Congress in regard to the economy of the nation.

The Faculty Scientific Achievement Award was presented during the Thursday evening dinner session to Borys Surawicz, M.D., Professor of Medicine, University of Kentucky College of Medicine and Ulrich Westphal, Ph.D., Professor of Bio-Chemistry,



Hoyt D. Gardner, M.D., Louisville, addresses the audience at the March 29 evening dinner session of the KMA Interim Meeting upon receiving a plaque honoring him for his two-year term of service as Chairman of the AMPAC Board.

University of Louisville School of Medicine.

Deans of the two medical schools in Kentucky accepted grants from the AMA Education and Research Foundation. Richard F. Swigart, Ph.D., from the University of Louisville School of Medicine, accepted a check for \$8,068.51. The Dean of the University of Kentucky College of Medicine, William S. Jordan, M.D., was presented a check for \$3540.00 for the use of his school.

In a special presentation at the dinner session, Hoyt D. Gardner, M.D., Louisville, was honored by KMA for his past two terms as Chairman of AMPAC. A plaque was presented to Doctor Gardner who is also a former KEMPAC Chairman.

"Current Trends in Health Care" was the topic of the panel discussion on Friday morning. Comments were made regarding the attitude of the consumer, by Robert V. Bullock, LL.M., Frankfort, Assistant Attorney General; of the hospital, by Wade Mountz, Louisville, President, Norton-Children's Hospital; of the physician, by John H. Budd, M.D., Cleveland, Member, AMA Board of Trustees, and of Congress, by James W. Foristel, LL.B., Washington, D.C., Director of the AMA Congressional Relations.

Robert E. Rinehimer, Camp Hill, Pa., as President of the Pennsylvania Blue Shield, discussed the role of the insurance commissioner in relation to health care delivery. The closing address of the two-day session was given by David A. Hull, M.D., Lexington, President of the Kentucky Foundation for Medical Care.



U. S. Representative M. Gene Snyder (R-Louisville) delivers the keynote address at the evening dinner session of the KMA Interim Meeting on March 29 at Lake Barkley Lodge.

## Emergency Nurses Seminar Scheduled June 14-15

A two-day seminar for emergency and critical care nurses will be held June 14 and 15 at the Ramada Inn-Bluegrass Convention Center in Louisville. Sponsored by the Kentucky Medical Association, the Kentucky Hospital Association and the Kentucky Chapter, American College of Emergency Physicians, the annual event will deal with many aspects of emergency care.



Doctor Boyd



Miss Romano

David R. Boyd, M.D.C.M. and Teresa L. Romano, R.N., both of the Illinois Department of Public Health in Chicago, will be two of the many guest speakers participating on the program.

Doctor Boyd is Chief of the Division of Emergency Medical Services and Highway Safety of the Public Health Department. He will be speaking on "The Illinois Trauma Program: Program to Date" and "Priorities in Multiple System Injuries."

The Chief Trauma Nurse Coordinator of the Department, Miss Romano will be dealing with the subject "Training and Education of Trauma Personnel and the New Health Professionals."

Faculty members of the University of Louisville School of Medicine, the University of Kentucky College of Medicine, as well as several other Kentucky

physicians, will be program participants. Burns, immunizations, poisoning, and athletic injuries are just a few of the topics to be discussed during this important program.

Nurses from emergency rooms, intensive care and coronary care units, operating and recovery rooms, and industrial nurses have been invited to attend this course. A \$20 fee will include the registration cost as well as the cost of the social hour and dinner on Thursday evening, June 14.

## AMA Officials Brief Ky. M.D.'s On National Health Insurance

Twenty-six physicians and wives representing the KMA Board of Trustees, KMA Committee on Legislative Activities, KMA Public Relations Committee and the Woman's Auxiliary to KMA, attended the Action '73 Leadership Conference, held at the KMA Headquarters Office on April 18, 1973. The meeting was devoted to the important subject of National Health Insurance.

Clinton S. McGill, M.D., of Portland, Ore., a member of the AMA Speakers Bureau on National Health Insurance, pointed out that the AMA's Medcredit Bill had more congressional sponsors than any other National Health Insurance proposals. In his presentation, Doctor McGill compared AMA's Medcredit Bill with other National Health Insurance proposals.

Mortimer T. Enright, Director of the AMA Speakers and Leadership Programs, presented research materials and communication aids, and outlined effective methods and techniques of speech delivery.

Robert Fry, of the AMA Department of Field Services, stressed the need for Kentucky physicians to be conversant on the AMA Medcredit Bill and presented a brief report on all National Health Insurance legislative proposals.



Kentuckians attending the AMA-AMPAC Public Affairs Workshop on March 10 and 11, 1973, and the KMA Washington Dinner on March 13, pose on the U.S. Capitol steps in Washington, D. C. with several AMA officials and U. S. Representative Tim Lee Carter, M.D. (tenth from right).



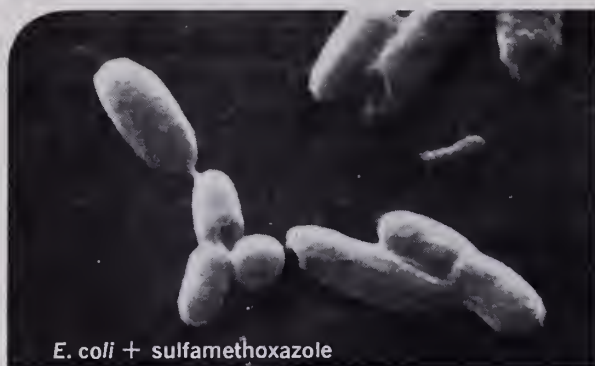
# Encounter under the Scanning Electron Microscope



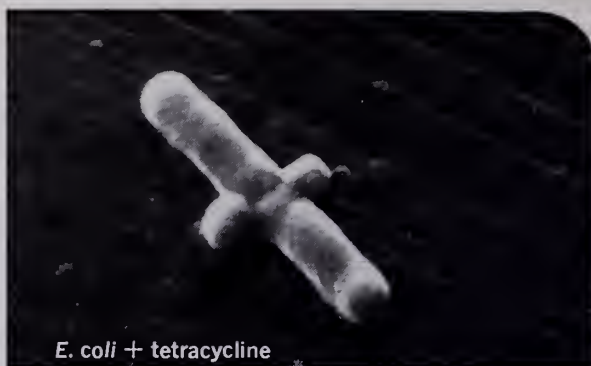
## SEM reveals changes in *E. coli* exposed to antibacterial agents

The Scanning Electron Microscope (SEM) is the only instrument which gives 3-dimensional views on a microscopic level. This permits the surface morphology of microorganisms to be observed in

detailed perspective. Changes in surface morphology of *E. coli* exposed to various antimicrobial agents are seen on the following page. An SEM photomicrograph of normal control *E. coli* appears above.



*E. coli* + sulfamethoxazole



*E. coli* + tetracycline



*E. coli* + cephalothin



*E. coli* + ampicillin

## Different modes of antibacterial action — Similar changes in morphology

As part of a series of experiments,<sup>1-3</sup> strains of *E. coli* proven susceptible to each antibacterial agent were exposed to 1 MIC of the respective antibacterials for a three-hour period. Included were cell-wall-active drugs, ampicillin and cephalothin; a drug interfering with intracellular protein synthesis, tetracycline; and a chemical agent which acts by interference with para-aminobenzoic acid, sulfamethoxazole.

As seen above, elongation of the bacilli, mid-cell defects and spheroplast-like forms may be appreciated with the SEM technique. These changes in bacterial morphology were similar... regardless of the antibacterial agent used and irrespective of

its mechanism of action.

"At present, the significance of these observations in clinical infection must be considered with caution, but it is hoped that these data will stimulate a reevaluation of present concepts of the nature and role of morphological variants of bacteria exposed to a variety of antibacterial factors."<sup>2</sup>

It should be noted that no clinical conclusions can be drawn from this study, as it is not always possible to extrapolate *in vitro* data to humans.

**References:** 1. Klainer, A. S.; Fass, R. J., and Perkins, R. L.: Scientific Exhibit presented at the 25th American Medical Association Clinical Convention, New Orleans, La., Nov. 28-Dec. 1, 1971. 2. Klainer, A. S., and Perkins, R. L.: *Antimicrob. Agents Chemother.*, 1:164, 1972. 3. Klainer, A. S.: Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

**Before prescribing, please consult complete product information, a summary of which follows:**

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**Contraindications:** Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

**Warnings:** Safety during pregnancy has not been estab-

lished. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

**Adverse Reactions:** Blood dyscrasias (agranulocytosis)



# Encounter in Clinical Practice

## Control of primary bacterial offenders

Antibacterial Gantanol® (sulfamethoxazole) controls susceptible strains of *E. coli* and other gram-negative and gram-positive organisms

often implicated in acute nonobstructed pyelonephritis and cystitis.

## Prompt antibacterial blood and urine levels

In from 2 to 3 hours after the initial 2-Gm adult dose, antibacterial levels are present in

both the blood and urine.

## B.I.D./T.I.D. dosage for around-the-clock coverage

Subsequent 1-Gm doses provide up to 12 hours of antibacterial coverage. More severe u.t.i. may require a q. 8 h. dosage regimen. Either schedule provides coverage during the waking

and sleeping hours—especially important during hours of sleep when normal urinary retention tends to favor bacterial proliferation.

## Also effective in nonobstructed chronic and recurrent u.t.i.

It is not uncommon for the elderly and the debilitated to develop chronic and/or recurrent nonobstructed urinary tract infections such as pyelonephritis and cystitis. Such cases often re-

spond satisfactorily to Gantanol. The increasing frequency of resistant organisms is a limitation of usefulness of antibacterial agents including sulfonamides, especially in chronic or recurrent u.t.i.

## Your Option: Tablets or Suspension

Either dosage form—the Tablets or the pleasant-tasting, cherry-flavored Suspension—can provide the dependable antibacterial activity necessary to control susceptible nonobstructed cystitis and pyelonephritis. Symptomatic improvement may usually be expected in 24 to 48 hours. The usual precautions with sulfonamide

therapy should be observed, including adequate fluid intake. Gantanol (sulfamethoxazole) is generally well tolerated with relative freedom from complications; the most common side effects are nausea, vomiting and diarrhea. Frequent c.b.c.'s and urinalyses with microscopic examination are recommended.

**In nonobstructed cystitis and pyelonephritis due to susceptible organisms**

**Gantanol®**  
(sulfamethoxazole)  
**Basic Therapy**

lastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thy-

roid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

**Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age** (except adjunctively with pyrimethamine in congenital toxoplasmosis).

**Usual adult dosage:** 2 Gm (4 tabs or teasp.) initially, then 1 Gm b.i.d. or t.i.d. depending on severity of infection.

**Usual child's dosage:** 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs b.i.d. Maximum dose should not exceed 75 mg/kg/24 hrs.

**Supplied:** Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110

## Digest of Proceedings, Board of Trustees

### March 28, 1973

The third regular session of the KMA Board of Trustees was held on March 28, 1973, at Lake Barkley State Park in Cadiz. At the beginning of the meeting, the President's Report and the Headquarters Office Report were accepted for information.

Ballard W. Cassady, M.D., Chairman of the KMA Budget Committee, presented the proposed budget for the 1973-74 Fiscal Year. The budget had previously been approved by the Budget Committee. The budget was accepted by the Board and the Committee was commended for its efforts and preparation of the budget.

Committee action and recommendations to the Board were as follows: 1) Approved a *School Health Committee* request of \$500 for possible use to help defray costs of the Second Annual Seminar on the Medical Aspects of Sports. 2) *Business Management and Services Committee* reported on several proposed programs concerning group travel policies, liability insurance and others. The Committee also reported on a proposal to charter a flight to the AMA Clinical Convention in Anaheim, California, this fall. The Board approved proceeding with plans for such a flight. 3) *Legislative Activities Committee* reported briefly on the Washington Dinner and also the fact that the first KMA Legislative Seminar is scheduled for June 15-17, Barren River State Park. 4) *Emergency Medical Care Committee* reported on plans for the Second Annual Seminar for emergency room nurses. 5) *Hospital Committee* Chairman, Richard B. McElvein, M.D., discussed several problems which have arisen concerning hospital emergency rooms. The committee recommended several ways to meet these problems and also suggested that Metropolitan Life Insurance Company (Medicare Part B) sponsor regional seminars for physician staff members to assist them in the proper methods of billing for services under Medicare. All these recommendations were accepted by the Board, as was the request of the *Public Relations Committee* to discontinue Community Health Week as a KMA project.

David A. Hull, M.D., President of the Kentucky Foundation for Medical Care, presented a detailed report to the Board regarding PSROs. He also received approval from the Board to request the State Comprehensive Health Planning Council to endorse the concept of a single PSRO for Kentucky.

Continuing medical education was considered at length and the Board requested that the Medical Education Committee continue their activities in developing continuing medical education programs.

J. Thomas Giannini, M.D., Senior AMA Delegate from Kentucky, reported on activities of the AMA delegation regarding membership. He further reported that the KMA had received recognition for increased membership in AMA in 1972.

The Chairman informed the Board concerning several state councils and boards to which KMA submits nominees to the Governor for appointment. A

list of these nominees was distributed and approved by the Board.

The Board approved an Executive Committee recommendation that a KMA-KNA Joint Practice Committee be established and referred the possible appointment of an ad hoc committee to study primary physicians in Kentucky to the Quick Action Committee.

Lee C. Hess, M.D., President of KMA, reported on action regarding an Inter-Professional Code between KMA and the Kentucky Bar Association. The Board accepted the Code and finalized plans for publication and distribution.

The Ad Hoc Committee to Select a KMA Parliamentarian recommended the appointment of Bennett L. Crowder, M.D., Hopkinsville, to this position. The Board approved this nomination. The Chairman reported that the State Department of Health had discussed with KMA the possibility of a special study of drug prescribing patterns of physicians in Kentucky. The Board voted to appoint a committee to work in conjunction with the State Department of Health and bring back recommendations to the Board.

The Chairman reported that the Interim Meeting Program Committee is making a detailed study of all aspects of the meeting and will report back later concerning continuation of the Interim Meeting.

The Board voted unanimously that a resolution and special award be presented to Hoyt D. Gardner, M.D., Louisville, to recognize him for his service as Chairman of the AMPAC Board of Directors during the past two years.

It was announced that the next regularly scheduled meeting of the Board would be held in August, but a special meeting may be held in the interim period.

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### Scientific Exhibitors Urged To Make Plans Soon

All physicians interested in presenting scientific exhibits at the 1973 KMA Annual Meeting are urged to begin making plans soon, according to Arnold C. Williams, M.D., Lexington, Chairman of the KMA Scientific Exhibits Committee.

Application for space should be received prior to July 1, 1973, at the KMA Headquarters Office. The exhibits should have a good subject and be of teaching value, but they do not have to be expensive or professionally constructed.

An application blank appeared in the April *Journal of KMA*, p. 281. You may, however, obtain an application blank by writing the KMA Headquarters Office, Scientific Exhibits, 3532 Ephraim McDowell Drive, Louisville, Kentucky 40205.



# IN ASTHMA IN EMPHYSEMA



*optional  
therapy*



## **THE** mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE** tablets contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2** tablets contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications** are listed above. **MUDRANE GG** tablets contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2** tablets contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with  $\frac{1}{2}$  to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

### **MUDRANE—original formula** *First choice*

### **MUDRANE-2** *When ephedrine is too exciting or is contraindicated*

### **MUDRANE GG** *During pregnancy or when K.I. is contraindicated or not tolerated*

### **MUDRANE GG-2** *A counterpart for Mudrane-2*

### **MUDRANE GG ELIXIR** *For pediatric use or where liquids are preferred*

*Clinical specimens  
available to physicians.*

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

*Manufacturers of Ethical Pharmaceuticals*





Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . a prophylaxis to prevent kidney or bladder calculi.

# Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, 300 mg.; SODIUM ACID PHOSPHATE, 500 mg.

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages

complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

## **Dosage:**

*For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.*

*2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.*

*A clinical supply will be sent to physicians and hospitals on request.*



WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

*Manufacturers of Ethical Pharmaceuticals*





## Sally's back in sew biz! After an arthritic flare-up.

**Note:** This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before beginning treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hematology, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, especially those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage for short-term relief of severe symptoms with the possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Subsequent capsules for tablets if dyspeptic symptoms persist should discontinue the drug and report any sign of: fever, sore throat, oral lesions (such as blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other signs of intestinal ulceration or hemorrhage, skin redness, significant weight gain or edema. A one-week trial is adequate. Discontinue in the absence of a response. Restrict treatment periods to one week in patients over sixty.

**Indications:** Acute gouty arthritis, rheumatoid arthritis, ankylosing spondylitis.

**Contraindications:** Children 14 years or less; senile paralytic or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia or presence of drug allergy; blood dyscrasias; renal, hepatic or cardiac dysfunction; hypothyroidism; thyroid disease; systemic edema; and salivary gland enlargement due to the disease myalgia rheumatica and temporal arteritis; receiving other potent chemotherapeutic drugs or long-term anticoagulant therapy.

**Precautions:** Age, weight, dosage, duration of therapy, and concomitant diseases, and concurrent potent therapy affect incidence of toxic reactions. Carefully observe the individual patient, especially the elderly (forty years and over) who have increased susceptibility to the toxicity of the drug. Use with caution in first trimester of pregnancy. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias,

### Butazolidin® alka Geigy

Each capsule contains:  
100 mg. phenylbutazone USP  
100 mg. dried aluminum hydroxide gel USP  
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.

including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmologic examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug. **Precautions:** The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

**Adverse Reactions:** This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis,

epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement (B)98-146-070-G

**Serious side effects do occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions.**

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals  
Division of CIBA-GEIGY Corporation  
Arlisle, New York 10502



# What should a medication for sleep be expected to provide?



**Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:**

**Indications:** Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or

recommended.

**Contraindications:** Known hypersensitivity to flurazepam HCl.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years

of age. Though physical and psychological dependence have not been reported with recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

**Precautions:** In elderly and debilitated patients, initial dosage should be limited to 15 mg to preclude oversedation, dizziness, or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with



## *Sleep* for 7 to 8 hours without need to repeat dosage during the night

No sleep medication has been as rigorously evaluated in the sleep research laboratory as Dalmane. Insomnia patients given one 30-mg capsule of Dalmane at bedtime, on average: fell asleep within 17 minutes, had fewer nighttime awakenings, spent less time awake after sleep onset, and slept for 7 to 8 hours with no need to repeat dosage during the night.

## *Sleep* with consistency

Dalmane (flurazepam HCl) has been shown to be consistently effective even during consecutive nights of administration. Thus there is little likelihood for the need to increase dosage to maintain therapeutic effect.

Dalmane is in a class by itself. Not a narcotic, barbiturate or methaqualone, Dalmane is the only available benzodiazepine specifically indicated for insomnia.

## *Sleep* with relative safety

Chronic tolerance studies have confirmed the relative safety of Dalmane (flurazepam HCl); no depression of cardiac or respiratory function was noted in patients administered recommended or higher doses for as long as 90 consecutive nights. In most instances when adverse reactions were reported they were mild, infrequent and seldom required discontinuance of therapy. Morning "hang-over" with Dalmane has been relatively infrequent. Dizziness, drowsiness, lightheadedness and the like have been the side effects noted most frequently, particularly in the elderly and debilitated. (An initial dose of Dalmane 15 mg should be prescribed for these patients.)

When your evaluation of insomnia indicates the need for a sleep medication, consider Dalmane—a single entity agent proved effective and relatively safe for relief of insomnia.

# DALMANE<sup>®</sup>

(flurazepam HCl)

## When restful sleep is indicated

One 30-mg capsule h.s.—usual adult dosage

(15 mg may suffice in some patients).

One 15-mg capsule h.s.—initial dosage for elderly or debilitated patients.

ROCHE

ROCHE LABORATORIES  
Division of Hoffmann-La Roche Inc.  
Nutley, New Jersey 07110

ent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

**Adverse Reactions:** Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported.

Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech,

confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.

**Dosage:** Individualize for maximum beneficial effect. **Adults:** 30 mg usual dosage; 15 mg may suffice in some patients.

**Elderly or debilitated patients:** 15 mg initially until response is determined.

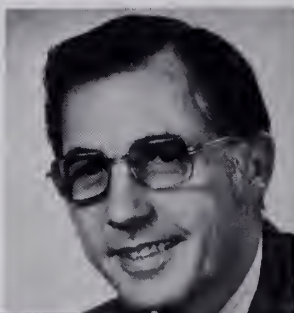
**Supplied:** Capsules containing 15 mg or 30 mg flurazepam HCl.

# Opinion & Dialogue

## "Prescription drugs – who should determine the maker?"

### Dispenser of Medicine

Clifton J. Latiolais  
President  
American  
Pharmaceutical  
Association



### Maker of Medicine

C. Joseph Stetler  
President  
Pharmaceutical  
Manufacturers  
Association



"Too many doctors are indifferent to the economic consequences of their decisions." So stated a recent issue of *Medical News Report* (December 4, 1972), an independent weekly newsletter published by former AMA Chief Executive F. J. L. Blasingame, M.D.

#### Doctor, are you indifferent...?

In discussing an anticipated increase in Blue Shield rates, Dr. Blasingame's newsletter had this to say:

"In general, it can be said, MD's have given the impression they are not particularly concerned with the increase in cost of health care to their patients..."

"True, an MD's training is primarily scientific, but in the real world of practice, all of his scientific decisions have a price tag, or an economic impact. The economics of health care beckon the practitioner's attention. Concern for economics of medicine

When the pharmacist recommends that a drug product other than the one ordered be dispensed, the prescriber invariably permits the change when he feels the best interests of the patient will be served.

#### Shortcomings of Pro-Substitution Argument

The fact remains that it is necessary for the prescriber to know that the change is being contemplated, and to be in a position to consent or demur. Without that opportunity, the unilateral decision of the pharmacist made in the absence of clinical knowledge of the patient, could expose him to needless risks, and in addition, jeopardize the relationship between the professions of Pharmacy and Medicine. In my view, there is nothing in the pro-substitution argument that offsets these risks.

#### The Issue of Drug Knowledge

Substitution advocates claim that the primary justification for changing the rules is the desire to better utilize pharmacists' knowledge about drugs. Yet the pharmacist's task to keep current on the entire field of drug therapy, to some degree puts him at a disadvantage. Most often, a practicing physician will need expert knowledge of no more than 25



...ould be an obligation of medical practice...  
"Medical societies ought to continue campaigns to point out the substantial savings that could be realized thru deductible insurance and protection for catastrophic illnesses. At the very least, they should, in the patients' interest, question the tactics of any insurance organization that raises health care costs by forcing policyholders to buy insurance they may not need or want and probably won't ever use.

"Too many doctors are indifferent to the economic consequences of their decisions. Too many, for example, habitually hospitalize patients for the convenience of the MD. It's nonsense to deny such habits exist...

"Doctors, thru their medical societies, have unhesitatingly appealed to their patients for support in the fight against government interference with the private practice of medicine. And the public in the past has responded. It's time the American Medical Association and state and local medical societies paid off the debt by decisive action to hold down the cost of medical care."

#### Cost of Drugs

Insurance rates and hospital charges are only two factors in health

care costs. The cost of drugs—both prescription and nonprescription—is another.

And when it comes to drug costs, the nation's pharmacists are *concerned*. Through their national professional society, the American Pharmaceutical Association, pharmacists are advising the public to use nonprescription medication cautiously and conservatively, and to seek the advice of their pharmacist before selecting or purchasing such drugs.

#### Outdated Laws

The pharmacist also is aware that when it comes to prescription drugs, often he has an even greater opportunity to reduce the cost to the patient—with no sacrifice in the quality of the medication dispensed. But in many states, outdated and antiquated laws prevent the pharmacist from engaging in drug product selection. "Drug product selection" simply means that the pharmacist functions in the patient's interest by consciously choosing, from the multiple brands available, a low-cost quality brand of the specific drug to be dispensed in response to the physician's prescription order.

Much *misinformation* has been purposely spread by those who stand to gain financially by maintaining

high drug costs to the public. An endless stream of propaganda has emanated from the drug industry in an effort to persuade the medical profession that these so-called anti-substitution laws should be retained. And as long as these laws are retained, the drug industry will continue its current marketing practices which contribute unnecessarily to high drug costs to patients. These practices also are inviting government agencies to expand their restrictive controls on physicians and pharmacists.

#### APhA Efforts

As pharmacists, we are concerned about health care costs. We hope that every physician shares our concern on this vital issue, and will give his personal support to the constructive efforts APhA has undertaken in the interest of all patients.

*(For a complete discussion of drug product selection, you are invited to request a free copy of the "White Paper on the Pharmacist's Role in Product Selection" from: American Pharmaceutical Association, 2215 Constitution Avenue, N.W., Washington, D.C. 20037.)*

30 drugs that he selects to treat the majority of conditions encountered in practice. Moreover, the physician's choice of a specific brand is based on his knowledge of the patient's medical history and current condition, and his experiences with a particular manufacturer's product.

Some substitution proponents have argued that the dispensing of a prescription is a simple two-party transaction between the pharmacist and the patient, and that a substituting pharmacist may avoid even a technical breach of contract by simply notifying the patient that he is making a substitution. I would judge that the courts would be sympathetic toward a pharmacist who substituted without physician approval and who undertook a legal defense that seeks to make the patient responsible for the pharmacist's actions.

#### Reduced Prescription Prices?

Substitution advocates are suggesting to the consumer, and particularly the consumer activist, that reduced prescription prices could follow legalization of substitution. There have been absolutely no evidence to justify this claim. To the contrary, experience in Alberta, Canada, where substitution is authorized, suggests

the opposite.

Many pharmacists understandably are concerned about the cost of maintaining multiple stocks of similar products. While there is no doubt that inventory costs rise when additional brands are stocked, it would be interesting to know how much they rise, and how many pharmacists actually stock *all* brands—of, say, ampicillin or tetracycline—or how long they keep "slow moving" products on their shelves before they are returned for credit. To ask that the industry eliminate multiple sources is to ask competitors to stop competing.

#### Drug Substitution—A License for the Unethical

Anti-substitution repeal would favor "corner cutting" pharmacists and manufacturers. For them, free substitution would be not a right, but a license. As an aftermath, it is quite likely that the confidence of both physicians and patients in the profession of Pharmacy would be eroded, as revelations about the unconscionable behavior of an undisciplined few were magnified in the press or in professional circles.

#### Summary

In short, what the American Pharmaceutical Association advo-

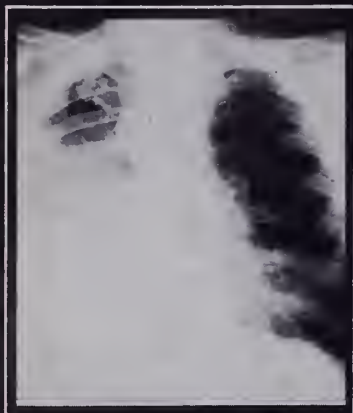
cates as a broad-spectrum panacea looks to us to be not only a minority view (advocacy of substitution is by no means a uniform policy in Pharmacy), but also an extraordinarily costly and ineffective remedy, whose side effects are odious. We believe (1) that an impressive majority of pharmacists prefer to work with Medicine and with industry, for the consumer, and for the general good, (2) that they seek the privilege to substitute when the patient might gain and when the patient's doctor agrees, and (3) that they seek to work for the resolution of genuine grievances openly and professionally.

*(For amplification of PMA views, please write for our booklet, "The Medications Physicians Prescribe: Who Shall Determine the Source?" It is available from: Pharmaceutical Manufacturers Association, 1155 Fifteenth Street, N.W., Washington, D.C. 20005.)*

Pharmaceutical  
Manufacturers Association  
1155 Fifteenth Street, N.W.  
Washington, D.C. 20005



**HERE** Pleural effusion




Wherever it hurts,  
Empirin Compound with  
Codeine usually provides  
the relief needed.

**HERE** Biliary calculi



In general, only pain so severe  
that it requires morphine is  
beyond the scope of  
Empirin Compound with Codeine.

 **prescribing convenience:**  
up to 5 refills in 6 months,  
at your discretion (unless  
restricted by state law); by  
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## **Medical Aspects of Sports Mtg. To Be Held May 17 in Richmond**

The Second Annual Medical Aspects of Sports Seminar will be held Thursday, May 17 at Eastern Kentucky University in Richmond.

Jointly sponsored by KMA, the Kentucky High School Athletic Association and the Department of Health, Physical Education and Athletics at Eastern, the one-day seminar will include lectures, demonstrations and consultations especially designed for physicians, school administrators, teachers, coaches, trainers and student trainers.

Ronald E. Walldridge, M.D., Shelbyville, Chairman of the KMA Committee on School Health, Physical Education and Medical Aspects of Sports, will preside at the annual event. The faculty for the day will include physicians, university instructors and athletic trainers and coaches.

Topics for discussion include certification of trainers, foot care, the family physician's role in sports medicine, nutrition and heat illness, mouth injury and resuscitation.

A \$5 registration fee will include the cost of a luncheon and a certificate of attendance. To register and to obtain further information for the Seminar, write Medical Aspects of Sports Seminar, Student Health Center, Eastern Kentucky University, Richmond, Kentucky 40475.

## **Sickle Cell Anemia Law Takes Effect in Ky.**

On March 16, 1973, the Sickie Cell Testing Law went into effect throughout Kentucky, requiring all black applicants for marriage licenses and all black

newborns to be tested for the trait of sickle cell anemia.

The law also states that counseling be provided to parents of newborns identified as having sickle cell anemia as well as to marriage applicants when both applicants have the disease or trait.

### **NEWS ITEMS**

**William G. Malette, M.D.**, Lexington, was recently elected President of the Association for the Advancement of Medical Instrumentation. Doctor Malette is Professor of Surgery and Associate Dean for VA Affairs at the University of Kentucky Medical Center.

**John F. Berry, Jr., M.D.**, Lexington; **Walter L. Boswell, M.D.**, Versailles and **Ralph C. Quillin, M.D.**, Lexington were recently named Fellows of the American College of Radiology. The radiologists were cited at a convocation during the College's 50th annual meeting in San Francisco.

**David A. Hull, M.D.**, Lexington, was named to serve on one of the seven AMA consulting task forces on PSRO. Doctor Hull, President of the Kentucky Foundation for Medical Care and KMA Trustee from the 10th District, will serve on the Task Force for Communications and Education.

---

### **SUPPORT OUR ADVERTISERS**

**When you see an advertisement in The Journal of the Kentucky Medical Association which you feel does a service to you, the physician, and to the medical profession, it would be helpful to all concerned if you would take a few minutes from your busy day to send a note of appreciation to the advertiser.**

# What's on your patient's face...

may be more important than his chief complaint

Patient P.T.\* seen on 3/29/67 shows typical lesions of moderately severe keratoses. Note residual scarring on ridge of nose from previous cryosurgical and electrosurgical procedures.



Patient P.T.\* seen on 6/12/67, seven weeks after discontinuation of 5% FU cream. Reaction has subsided. Residual scarring not seen except that due to prior surgery. Inflammation has cleared and face is clear of keratotic lesions.

\*Data on file,  
Hoffmann-La Roche  
Inc., Nutley, N.J





# The lesions on his face are solar/actinic— so-called "senile" keratoses... and they may be premalignant.

## Solar, actinic or senile keratoses

These lesions may be called by several names, but they usually can be identified by the following characteristics. The typical lesion is flat or slightly elevated, of a brownish or reddish color, papular, dry, rough, adherent and sharply defined. They commonly occur as multiple lesions, chiefly on the exposed portions of the skin.

## Sequence of therapy— selectivity of response

After several days of therapy with Efudex® (fluorouracil), erythema may begin to appear in the area of the lesions; this reaction usually reaches its height of unsightliness and discomfort within two weeks, declining after discontinuation of therapy. This reaction occurs in affected areas. Since the response is so predictable, lesions that do not respond should be biopsied.

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Treatment with Efudex provides highly favorable cosmetic results. Incidence of scarring is low. This is particularly important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Multiple actinic or solar keratoses.

**Contraindications:** Patients with known hypersensitivity to any of its components.

**Warnings:** If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

**Precautions:** If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

**Adverse Reactions:** Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

**Dosage and Administration:** Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

**How Supplied:** Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

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(warning: may be habit forming)			

**Brief summary.** Adverse Reactions: Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Contraindications: Glaucoma; renal or hepatic disease, obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); or hypersensitivity to any of the ingredients.

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Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Relief of anxiety and tension occurring alone or accompanying various disease states.

**Contraindications:** Patients with known hypersensitivity to the drug.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

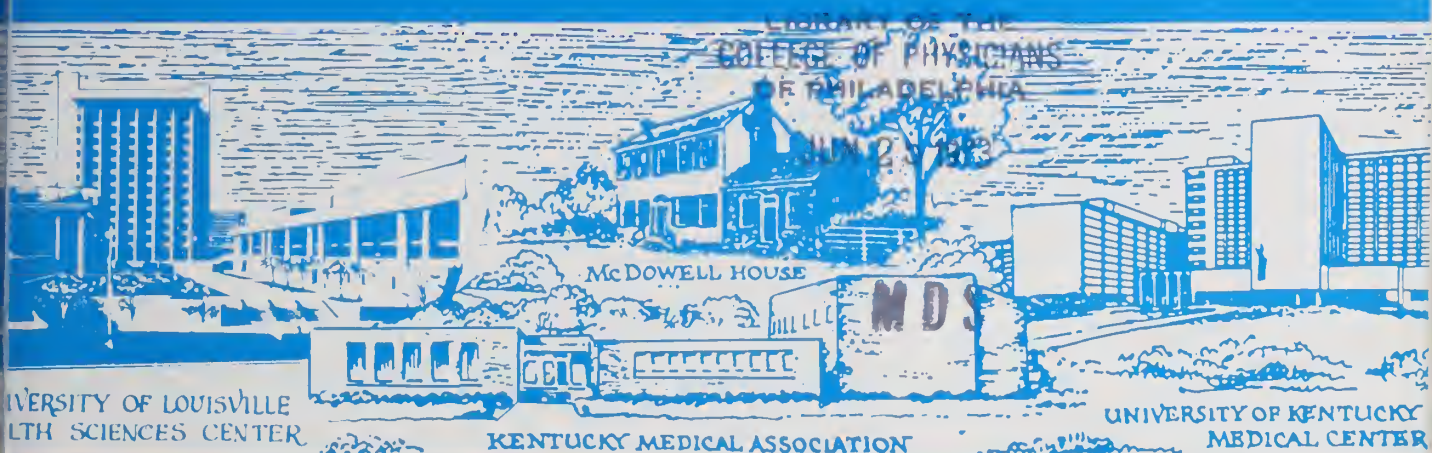
**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

**Adverse Reactions:** Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

**Supplied:** Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.



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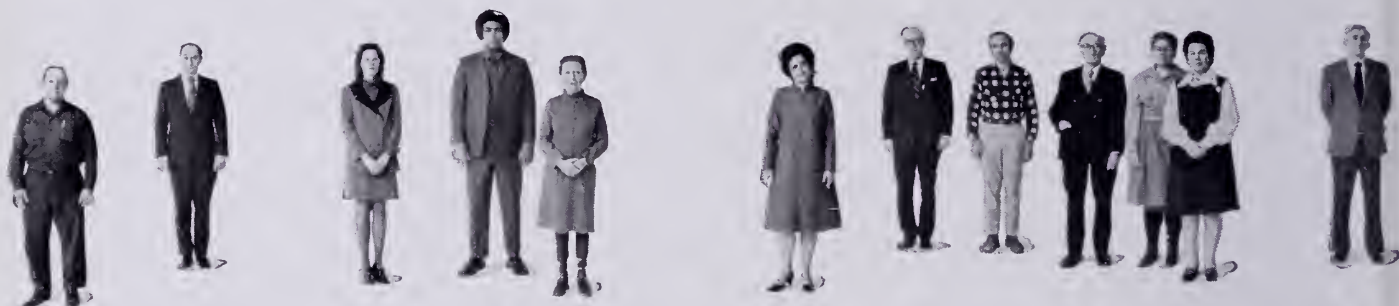
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While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

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Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.



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**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

**Dosage:** Individualize for maximum beneficial effect.

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13th ....	J. WESLEY JOHNSON, 2301 Lexington Ave., Ashland 41101 (606) 325-1151 ....	1973
14th ....	BALLARD W. CASSADY, Pikeville Med. Bldg., Pikeville 41501 (606) 437-6698 ...	1974
15th ....	HAROLD L. BUSHEY, 406 Knox St., Box 770, Barbourville 40906 (606) 546-3024 ..	1975

### BUYERS GUIDE

#### JUNE BUYERS GUIDE FOR JOURNAL OF KMA 1973

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# MESSAGE FROM THE PRESIDENT

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## PSRO-NHI — "What's Next?"

**D**O you think that the PSRO legislation and consideration of National Health Insurance bills will be an end by the proponents of Socialized Medicine in this country to further encroach upon the medical profession? According to Wilbur Mills, the timetable for consideration and realization of the National Health Insurance program has been set for the fall of 1973. The contents of this bill at the present time are still indefinite but it is certainly within the realm of possibility that a composite of present ideas will be presented and passed.

Have you read AMA's Mediredit proposal for national health care? Do you know specifically the method of its operation in regard to health care for all people in the United States? Do you know the expense of Mediredit in comparison to the cost for other bills and proposals being presented to Congress? Most are vague in regard to expenses to be incurred.

This might be a good time for you to become acquainted with your Congressman and/or Senator, if you haven't already done so. Make an effort to discuss with him his feelings about the various proposals in the field of health insurance which are now being considered by Congress. Prepare yourself to be specific with him regarding the content of these proposals and the expected costs. Talk about the merits of the Mediredit proposal versus other proposals for National Health Insurance.

There are approximately 185 sponsors of the AMA Mediredit bill at the present time. Do you know whether your Congressman has just given lip service or if he is going to vote for this proposal in contrast to other proposals.

It is imperative to us in medicine that you be able to discuss pertinent facts concerning this legislation with your elected representatives in Washington. If we do not take a positive stand on this matter, we will not be able to have the type of legislation which will be in the best interest of the public and our profession.

J. THOMAS GIANNINI, M.D.  
SENIOR DELEGATE TO THE AMA

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*This is the third in a series of articles written at the request of KMA President Lee C. Hess, M.D.*

# *The Kentucky Foundation for Medical Care*

## PSRO Implementation in Kentucky

**S**INCE October, 1972, the requirement for Professional Standards Review Organizations has been law, and your Foundation has been working to develop a plan that would insure that the law is administered in a way that is acceptable to physicians and equitable to the public we serve.

At a meeting held on March 28, 1973, the KMA Board of Trustees and the Board of Directors of the Foundation approved the concept of a single state-wide PSRO to be created by the Foundation, utilizing many of the theories and organizational ideas of the present peer review mechanism. Since that time, the Foundation has drafted an operational plan for PSRO which calls for a state-level policy-making body, district or regional review committees, "first level review" or hospital utilization review committees, and local lay coordinators directly supervised by physician advisors.

On May 16, a special joint meeting of the KMA and KFMC Boards was called to consider the PSRO proposal. The plan was discussed in detail and modifications were made. Additionally, members of allied and affiliated

groups were in attendance at the meeting and were asked to comment on the plan and to voice their opinions. Associated groups represented were the Kentucky Dental Association, the Kentucky Hospital Association, the Kentucky Osteopathic Medical Association, the Kentucky Health Insurance Council, Kentucky Blue Cross-Blue Shield, the Kentucky Medical Assistance Program, the Kentucky Comprehensive Health Planning Council, the Kentucky Program Development Office and Medicare, Parts A and B.

Aside from minor questions and necessary changes, all participants at the meeting accepted the proposal favorably. It is very gratifying, I think, to know that what can be considered as a broad cross-section of the state's health care community is supportive of our ideas on this vital aspect of our professional lives.

Should the federal government not accept the plan for PSRO in Kentucky developed jointly with concerned groups, we can surely say that we have applied ourselves diligently to resolving a major and far-reaching task.

DAVID A. HULL, M.D., PRESIDENT



---

## ***From the files of the***

### **COMMITTEE FOR THE**

# **STUDY OF MATERNAL MORTALITY**

---

This 20-year-old unmarried black gravida 2, para 0, abortus 1, was admitted to the hospital at 3:20 a.m., 2-19-71, by wheelchair in apparent early labor, at term. She weighed 193 pounds and had gained approximately 35 pounds.

Her membranes ruptured spontaneously at home at 2:30 a.m. She had been seen only two times with this pregnancy and had a weight gain of 12 lbs in one four week interval. She was seen one week prior to admission.

On admission to the hospital her blood pressure was 146/106. Vaginal examination revealed the cervix to be 1 cm dilated—3 station with the vertex presenting. The fetal heart tones were in the left lower quadrant. She had 1+ ankle edema and 4+ albuminuria present in the urine.

At 3:40 a.m., 50 mg of Phenergan and 1/400 gr of Scopolamine were ordered. Her blood pressure at 4:00 a.m. was 138/100. The fetal heart was good. She had received Serpasil at this time.

At 7:00 a.m., her blood pressure was 140/90. Her contractions were still irregular and mild. At 10:00 a.m. her blood pressure was 140/100. After she had been examined by her physician, her contractions were still irregular so 500 cc D5W with 1 ml oxytocin was started at 11:10 a.m. Her blood pressure was 140/100 at 11:38 a.m., she was having contractions described as strong, occurring every two to three minutes. The fetal heart was good. She was sedated with 75 mg of Demerol, 25 mg Phenergan at 1:30 p.m. At 2:00 p.m. her blood pressure was 140/80, and the contractions were occurring every two to three minutes. Vaginal examination revealed the cervix still somewhat thick but 6 cm dilated. At 3:45 p.m. she was described as "somewhat restless although sedated." Her blood pressure was not noted at this time nor the cervical dilation.

She was taken to the delivery room at 7:40 p.m. when she was completely dilated on vaginal examination. There were no notes of her progress or lack of progress in the delivery room till 1:00 a.m., 2-20-71, when her blood pressure was recorded at 140/108.

A spinal was administered at 1:47 a.m. using 7½ mg of Pontocaine between L-4 and L-5. She sat up for 45 seconds and then was placed in 10 degree Fowler's position.

At 1:50 a.m. her pulse was slow and no blood pressure was obtained. A few minutes later no pulse was palpable. She was intubated and epinephrine 1 to 1,000 was given intracardiac. She was delivered

of a 7 lb. 9½ oz. girl from the ROP position with low forceps. The infant's condition initially was not good, the cry was delayed 20 minutes. It did well subsequently and was discharged 2-25-71. The patient, however, expired at 2:30 a.m.

An autopsy was obtained. The significant findings were confined to the lungs. Gross examination revealed congestion, however microscopic examination revealed multiple acute pulmonary infarcts. These were felt occurring during the patient's labor. No amniotic fluid emboli was seen. No source of thrombotic emboli was found. The final anatomical diagnosis was:

Bilateral, multiple acute pulmonary infarcts with clinical pre-eclampsia.

#### **Comment**

The Committee condemned the management of this patient on several points. It is obvious from the protocol that the patient had severe pre-eclampsia as manifested not only in her blood pressure but her proteinuria. It is impossible to tell from the protocol about her degree of hyper-reflexia but it is assumed that this may have existed also. The management with Serpasil is certainly not warranted. As a general rule, oral medications are never indicated during pregnancy as all laboring patients have a relative ileus. The patient should have received intravenous magnesium sulphate and certainly more intensive efforts at delivery should have been accomplished. The second stage of labor was entirely too long.

A second point to be condemned is the use of a high oxytocin concentration in the intravenous drip. It is noted in the protocol that the patient received 1 cc or 10 units of Pitocin per 500 cc of intravenous fluid. The rate at which this fluid was administered is not given, but certainly this concentration is dangerously high.

The next point to be condemned is the apparent 5½ hours in the second stage in the delivery room. A good working rule is never to allow a patient to remain in second stage for more than two hours without a pattern of active intervention.

The final cause of death was undoubtedly anesthesia. The use of spinal or conduction anesthesia in hypertensive disorders is dangerous. The danger is chiefly for the fetus in that maternal hypotension will often produce acute placental insufficiency with

*(Continued on Page 368)*

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| <input type="checkbox"/> | <input type="checkbox"/> | Federal aid to medical students?   |
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| <input type="checkbox"/> | <input type="checkbox"/> | More effective occupational health and safety laws?                      |
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If you're for the first nine but against the tenth,

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- 14-15 Emergency Room Nurses Seminar, Ramada Inn/Bluegrass Convention Center, Louisville
- 19 Postgraduate course, "Hospital Acquired Infections," William Schaffner, M.D., Nashville, Kentucky Baptist Hospital, Louisville

**JULY**

- 10 6th Trustee District meeting, Bowling Green
- 12-13 Regional Seminar, Kentucky Academy of Family Physicians, Lake Barkley State Park, Cadiz

**SEPTEMBER**

- 18-20 KMA ANNUAL MEETING, Ramada Inn/Bluegrass Convention Center, Louisville

**IN SURROUNDING STATES**

**JUNE**

- 23-28 AMA Annual Meeting, Americana Hotel, New York City

**SEPTEMBER**

- 17-18 AMA Annual Congress on Occupational Health, Benjamin Franklin Hotel, Philadelphia

**NOVEMBER**

- 14-17 Seminar on "Life-Saving Measures for the Critically Injured," sponsored by the American College of Surgeons and the University of Tennessee College of Medicine, Shrier Auditorium, Memphis

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**Maternal Mortality**

(Continued from Page 361)

fetal death. Nevertheless, a sympathetic blockade produced by conduction anesthesia may produce precipitous blood pressure falls in the mother. It is probable in this case that the patient had a total spinal anesthetic with precipitous fall in the blood pressure which was unresponsive to inadequate resuscitative measures. This case demonstrates once and again the adage that anesthesia can be the most dangerous part of obstetrics. The Committee classified this as a preventable death with direct obstetric factors.

**PRESCRIBING INFORMATION**  
**Antiminth (pyrantel pamoate) Oral Suspension**

**Actions.** Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 µg/ml.) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

**Indications.** For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

**Warnings.** *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

**Precautions.** Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

**Adverse Reactions.** The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

**Dosage and Administration.** *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day; and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices. Because of limited data on repeated doses, no recommendations can be made.

**How Supplied.** Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles.

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\*Data on file at Roerig. Please see prescribing information on facing page.

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# *The* JOURNAL *of the* Kentucky Medical Association

ISSUED MONTHLY UNDER THE DIRECTION OF THE BOARD OF TRUSTEES

VOLUME 71

JUNE 1973

No. 6

## Allergy and Anesthesia An Evergrowing Relationship

J. ANTONIO ALDRETE, M.D., M.S.\*

*Louisville, Kentucky*

*Anesthetic agents and other adjuvant drugs used during anesthesia can elicit a variety of allergic phenomena; i.e., contact dermatitis, angioneurotic edema and hepatic necrosis secondary to hypersensitivity. Fortunately, these complications are rare, but they nevertheless should be kept in mind since most of them are preventable.*

THE number of therapeutic agents is constantly on the rise, with a parallel growth in the number of patients taking a variety of drugs. It is therefore of prime importance that a brief, but informative history about allergies and sensitivities be obtained during the pre-anesthetic visit with each patient who is to undergo surgery.

It is not clearly understood whether allergic responses are made dormant or more apparent during the physiologic changes produced by anesthesia, such as sympathetic blockade, denervation, central nervous system depression and a state compatible with blood levels of catecholamines higher than normal. It has been observed, however, that local anesthetics injected in areas with their sensory and sympathetic innervation blocked by subarachnoid an-

esthesia have yielded larger erythema and wheals than injections of the same drugs given in nonanesthetized areas.<sup>1</sup>

Nevertheless, we have to admit that the true incidence and degree of allergic drug reactions occurring during anesthesia may be unknown either because they are overlooked or merely because the victim is unconscious and unable to express the symptoms thereof.

In obtaining information regarding drug allergy, the anethetist must secure as much detail as possible to help distinguish between true allergic reactions and drug overdosage, interactions or side effects which not infrequently are interpreted as hypersensitivity. Special consideration must be given to patients with multiple sensitivities, in contrast to those who may have had a questionable rash after the administration of one particular substance.

Substances used during anesthesia as adjuvants may release chemical mediators (i.e., histamine) that elicit bronchospasm. Similarly, a number of drugs may be potentially antigenic and therefore considered dangerous for patients with asthma or with multiple drug allergies. In this review, substances with similar action but apparently without untoward effects to this type of patients will be mentioned. Space will not permit a complete listing, however.

### Sedatives and Hypnotics

A considerably larger number of patients appear to have allergic responses to barbiturates than to other sedatives, but anaphylactic

\*Professor and Chairman, Department of Anesthesiology, University of Louisville School of Medicine, Louisville

reactions are fortunately rare. The administration of morphine sulfate has been shown to elevate the levels of histamine in arterial blood.<sup>2</sup> Although it has been given to asthmatic patients without apparent deleterious effects, it seems undesirable to recommend its use in these instances, knowing that we have available other compounds that will have the same action without this complication. The synthetic narcotics meperidine and pentazocine are analgesics that cause allergic reactions more rarely.

For preoperative sedation and hypnosis the use of tranquilizers is favored. Hydroxazine has been shown to produce an increase in airway conductance in asthmatic patients.<sup>3</sup> Chloral hydrate has also been reported to elicit adequate hypnosis in severe asthmatic patients without significant alterations in arterial blood gases and forced expiratory volume in one second.<sup>4</sup>

#### Intravenous Anesthetics

Severe anaphylactic reactions have been observed following sleep doses of sodium thiopental given intravenously.<sup>5-9</sup> Some patients have had positive skin tests, while others did not. Since these reactions are believed to be elicited by the sulphur atom contained in this ultra-short-acting barbiturate, theoretically oxybarbiturates such as methohexital may be given safely. At any rate, whenever a history of allergy to barbiturates is present, it is advisable to choose a completely different agent or use an inhalation induction.

The recently introduced dissociative anesthetic ketamine HCl has not only failed to produce deleterious effects in asthmatic patients but has lowered airway pressure, possibly secondary to its catecholamine release which decreases bronchoconstriction.

A combination of pentazocine and diazepam (pentazepam) has been used to induce neuroleptanalgesia in asthmatic patients without deleterious effects.<sup>10</sup> The combination of the narcotic fentanyl and the tranquilizer droperidol, in the form of Innovar, also appears to be satisfactory except for some instances of "thoracospasm" with severe impediment of ventilation.

#### Inhalational Agents

Although certain alterations of liver function

tests can be seen after exposure to most anesthetic agents, some, such as chloroform, have been classified as hepatotoxic. During the last decade accumulated information has implicated halothane as a causative agent of hepatitis, through a mechanism of hypersensitivity.<sup>11</sup> Reports of fatal liver necrosis observed after halothane anesthesia prompted a retrospective study of 254,896 halothane anesthetics, including 14,100 patients who received halothane on two or more occasions. Of all patients, 81 died of liver necrosis; however, of these the massive lesion was unexplained in only seven. Four of the seven had been anesthetized with halothane several times within a period of six weeks; the other three had just one exposure to the agent.<sup>12</sup>

Several reports have suggested that hepatitis has been caused by repeated exposures to halothane. Antimitochondrial antibodies,<sup>13</sup> lymphocyte stimulation<sup>14</sup> and provocation tests<sup>15</sup> have been used to confirm these suspicions. However, other factors such as obesity, aberrations of metabolic enzyme mechanisms, pre-existing liver disease, blood transfusion and other drug therapy are not completely ruled out as contributing to hepatitis.<sup>16</sup>

Other halogenated hydrocarbon anesthetics such as methoxyflurane<sup>17, 18</sup> and fluroxene<sup>19</sup> are also believed to have caused cases of acute liver necrosis, though complete evidence for the establishment of cross reactivity is lacking.

At any rate, the recommendation that an interval of three months be allowed between repeated exposures to halothane seems wise. When staged procedures are contemplated perhaps halothane can be given for the short cases and narcotic-relaxant intravenous techniques can be used alternatively.<sup>16</sup> If unexplained fever, rash and leucocytosis are present between one and five days postoperatively, a tentative diagnosis of halothane hypersensitivity should be considered. However, the safety and ease of administration of halothane are not to be disregarded and the anesthetic banned because of these very rare and still not fully proven complications.

#### Local Anesthetics

In a recent review of the literature on allergic reactions produced by local anesthetics, it was again emphasized that this type of com-



plication is currently very rare<sup>20</sup> and that untoward responses which do occur during their administration more frequently have other causes.

As reported by Alexander,<sup>21</sup> most of the true allergic reactions to local anesthetic agents were dermatitis. Anaphylactoid responses have seldom been documented; however, when they did occur the majority followed repeated exposures to para-aminobenzoic acid esters.

Much information can be obtained by questioning the patient. Whenever overdosage or intravascular injections were suspected, or the response suggested parasympathetic overactivity, skin testing has been confirmatory in most cases.

It is not remote that patients with multiple allergies may be more likely to develop skin manifestations after the administration of local anesthetics; i.e., allergy to penicillin is frequently associated. Siegal<sup>22</sup> reported three patients with positive skin tests to procaine and to penicillin. This relationship may be coincidental in a susceptible patient responding to both drugs independently. Cross-sensitization between the two compounds is unlikely in view of their completely different chemical structures.<sup>23</sup> It is possible, though, that patients develop sensitivity to the procaine salt fraction included in the procaine penicillin preparation.<sup>24, 25</sup> Skin testing has also been found reliable for evaluation of patients supposedly allergic to penicillin.<sup>26, 27</sup> This observation and the fact that eight of the 27 patients we studied had a history of penicillin allergy might suggest that procaine should not be employed in these cases.<sup>28</sup> However, a larger population group needs to be examined before definite conclusions can be drawn.

The interpretation of intradermal reactions is sometimes difficult. Nevertheless, the test can be standardized by following certain rules during its application and a rigid criterion for its interpretation. Factors such as disinfecting of the skin, the time of day, volume of antigen injected, ambient room temperature and systemic therapy can modify skin responses.

Although 0.1 ml may be considered a large volume to use as a test, we have observed no untoward effect from it. Nearly all positive responses were elicited by the ester-type of local anesthetic drugs, most of them being con-

firmed by the Prausnitz-Kustner reaction. This procedure was done in an effort to identify plasma antibodies which, in the presence of a sensitizing antigen, such as a local anesthetic acting as a hapten, would elicit positive skin responses when injected into the skin of non-allergic individuals. We do not recommend its routine use because of the remote, but possible risk of transmission of serum hepatitis.<sup>1</sup>

Beveiman<sup>29</sup> and Green and collaborators<sup>30</sup> suggested that delayed and immediate hypersensitivity to the same allergen can occur in the same person. The observations by Kahn and associates<sup>31</sup> noting that patients with immediate methylparaben intracutaneous sensitivity proven by intradermal injections, failed to show any response when studied by patch testing, suggested that if they do occur simultaneously, they do not happen with parabens or procaine.

To evaluate a patient with a previous history of allergy to local anesthetic drugs, the following steps are suggested:

- (1) Complete investigation of the episode of allergy by interrogation of the patient and physician or dentist involved, as well as scrutiny of the medical records.

- (2) Intracutaneous tests as recommended, using solutions without preservatives and under appropriate conditions.<sup>1</sup>

- (3) Challenge with progressively larger doses of the apparently nonoffending anesthetics.

The use of procaine HCl as an anesthetic for skin wheals is questioned, since true dermal hypersensitivity occasionally occurs and false-positive cutaneous responses may exist. Local anesthetic agents of the amide type are more desirable for this purpose.

### Adjuvants

*Muscle relaxant drugs*, utilized in clinical anesthesia can also elicit allergic reactions. D-tubocurarine has been shown to elicit the release of histamine both locally and systemically. Although rare, in susceptible individuals it is manifested by erythema, urticaria, lid edema and even laryngeal obstruction.<sup>32-34</sup> Gallamine triethiodide can cause similar responses although more uncommonly and to a lesser degree.<sup>35, 36</sup>

Succinylcholine, perhaps the most frequently used relaxant drug in the operating room, has

been shown to elicit true anaphylaxis in patients with multiple allergies.<sup>37</sup>

**Blood transfusions:** In the awake patient, itching, erythema, urticaria, chills and fever may herald hypersensitivity to the transfused blood. Occasionally laryngeal edema and bronchospasm are also seen. The onset of symptoms may appear even before the unit has been totally transfused. The cause is rarely identified, but an antigen-antibody reaction is presumably implicated.<sup>38</sup>

In the anesthetized patient, the first warning signs may be the appearance of erythema along the pathway of the vein where the blood is entering the circulation and the presence of urticaria on the chest, face and neck may follow. Changes in vital signs are rarely seen.

Patients with previous antecedents of transfusion reactions, atopy, hay fever or multiple drug allergies appear to be more susceptible to this complication. In these instances, the prophylactic administration of antihistaminic drugs appears to curtail the frequency with which these reactions are seen, but should not be used routinely. Whenever one of these reactions is diagnosed during the transfusion of the first unit, it is rarely necessary to interrupt it since it is transient and responsive to treatment.<sup>39</sup> However, if it does occur during the second unit transfusion, since it is impossible to ascertain which unit originated the reaction, it is justifiable to discontinue the second unit and to attempt to identify the precise nature of the reaction. Diphenhydramine HCl (50 mg.) given intravenously is sufficient to treat mild episodes. Epinephrine (0.3 to 0.6 mg.) may be given subcutaneously and hydrocortisone (250 mg.) may be given intravenously for severe reactions.<sup>40</sup> In every case, close observation is advisable. If respiratory distress due to laryngeal edema is present, assurance of airway patency, cold oxygen mist, IPPB with racenine epinephrine nebulization and the intravenous injection of dexamethasone are indicated.

**Volume expanders:** Anaphylactic reactions have been documented after the intravenous infusion of dextran.<sup>41</sup>

**Other medications:** The incidental administration of other medications may elicit allergic responses. Although during anesthesia some of these may be attenuated, they still can mani-

fest even with sudden cardiovascular collapse and/or anaphylaxis. Intravenous injections of penicillin have resulted in cardiac arrest in patients undergoing surgical procedures.<sup>42, 43</sup>

### Anesthesia and the Immune Response

There is some laboratory and clinical subjective evidence to suggest that anesthesia may perhaps increase morbidity for bacterial infection. Low concentrations of anesthetics may stimulate cell growth, while higher concentrations may depress the same function. Nitrous oxide has been shown to produce lymphopenia and bone marrow depression in rats exposed for several days.<sup>44</sup> Cyclopropane, ethylene, acetylene and xenon in subanesthetic concentrations inhaled for six days also produced similar changes.<sup>45</sup> Much remains to be studied on this subject. For further and detailed information the reader is referred to the recent review by Bruce and Wingard.<sup>46</sup>

### Asthma and Anesthesia

The anesthetic management of the asthmatic patient deserves special consideration since the manipulation of the airway, the use of allergenic or histamine-releasing drugs and the added stress of surgery may dramatically unbalance a well-controlled patient. Some of the pharmacological implications were discussed earlier. Emphasis on preoperative evaluation and preparation is desirable in order to prevent transoperative and postoperative morbidity. Finally, the anesthesiologist can provide valuable help to the allergist and the internist in dealing with a patient with an advanced status asthmaticus. In these circumstances, mechanical ventilation and respiratory care can be life saving. For a complete discussion on this subject, the reader is advised to consult another publication.<sup>47</sup>

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# Kentucky Infant Feeding Practices (1971)<sup>†</sup>

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*In order to provide optimal nutritional counseling to Kentucky mothers, it is necessary to know what mothers have learned about infant feeding, their current infant feeding practices and what formulas are available to them.*

A FEEDING practice survey was conducted in the summer of 1971 by the Nutritional Program of the Division of Maternal and Child Health, Kentucky State Department of Health, to learn answers to these questions:

1. What are the hospital nursery practices with respect to infant formulas?
2. What infant feeding instructions are given to mothers in the hospitals?
3. What formulas are available for Kentucky infants?
4. How much do these infant formulas cost?
5. What are the infant feeding practices used by mothers after hospital discharge?
6. More specifically, what are the infant feeding practices with respect to the use of iron fortified formula?

The survey was conducted by the Kentucky Public Health nutritionists, with the help of public health nurses, home economic students and volunteers. Questionnaires were completed by interviewing the nursery personnel of 40 Kentucky hospitals. Three hundred and ten mothers were interviewed in clinics or at home after hospital discharge. Availability and formula cost data was obtained by recording counter prices in 439 food and drug stores. All information presented was obtained from the following counties: Ballard, Barren, Bell, Bourbon, Butler, Calloway, Campbell, Christian,

Clark, Clay, Daviess, Estill, Fayette, Franklin, Fulton, Garrard, Harlan, Harrison, Henderson, Hopkins, Jefferson, Knott, Kenton, Lee, Leslie, Logan, Lyon, Madison, Marion, Marshall, McCracken, McCreary, Mercer, Monroe, Nicholas, Nelson, Ohio, Owsley, Perry, Pulaski, Rowan, Scott, Shelby, Washington, Warren, Wolfe and Woodford.

## Hospital Nursery Infant Formula

The nursery personnel of 40 Kentucky hospitals were questioned about their use of infant formulas. In 1971, the 40 hospitals surveyed delivered 29,687 babies, or approximately one-half of 1971 Kentucky live births. Ten of these hospitals have large obstetric units, each delivering more than 1,000 babies per year. These ten large nurseries cared for 60% of the newborns included in this survey. Nursery formula routine did not vary significantly between the large and smaller units (Table 1).

Table 1

Use of Infant Formula in  
Kentucky Hospital Nurseries

	Nurseries	
	10 Large	30 Small
Single formula system	7 ( 70%)	21 (70%)
Two separate formula systems	1 ( 10%)	6 (20%)
Formula of physician's preference	2 ( 20%)	3 (10%)
Iron fortified formula	4 ( 40%)	11 (37%)
Disposable formula system	9 ( 90%)	23 (77%)
Free "going-home-formula-pack"	10 (100%)	27 (90%)

## Infant Feeding Instruction Given to Mother in Hospital

In those hospitals surveyed, with one exception, postpartum mothers received infant feeding instruction from the physician and/or nursery personnel. Printed instructions from baby milk companies are given to mothers in 70% of these nurseries. Only three nurseries provided a formula preparation demonstration (Table 2).

Later, when 310 mothers were asked what they thought was most important with regard

<sup>†</sup>From the Nutritional Program, Division of Maternal and Child Health, Kentucky State Department of Health, Frankfort; the Department of Pediatrics, University of Kentucky Medical Center, Lexington, and the Committee on Fetus and Newborn, Kentucky Chapter, American Academy of Pediatrics.



to infant feeding instruction received in the hospital, responses were as follows:

54 (17%)	frequency of feeding
48 (15%)	sterilization and how to make formula
25 (8%)	when to start solids
23 (7%)	how to feed
13 (4%)	how much to feed
5 (2%)	burping
142 (46%)	didn't learn anything; no comment; no instruction given

Table 2

Source of Feeding Information  
In 40 Hospitals

Physician and Nurse	8 (20%)
Physician only	7 (18%)
Nurse only	24 (60%)
Pamphlet	28 (70%)
Formula preparation demonstration	3 (8%)

## Availability and Cost of Formulas

To determine the availability and cost of infant formulas, 439 stores were visited in the aforementioned counties. These 439 stores were divided accordingly: 255 corner and country stores, 119 discount and supermarkets and 65 drugstores. Table 3 lists the availability figures of various formula preparations.

Of the 255 corner and country stores surveyed, 50% stocked any kind of baby formula. All discount, supermarket and drugstores stocked infant formula.

Since 40% of the population studied depend on financial assistance, it is pertinent to the question of the availability of infant formula that local stores accept food stamps. In this survey, 94% of corner and country stores accepted food stamps as well as 97% of discount and supermarkets. None of the drugstores accepted food stamps.

Assuming that an infant consumes 26 ounces of formula a day, the formula cost per day to parent is listed in Table 4.

## Infant Feeding Practices After Hospital Discharge

After hospital discharge, mothers were interviewed when they returned to Public Health Department and University Hospital Clinics. The respondents, then, are all mothers of infants who do not obtain routine well baby care from private physicians. Of the mothers interviewed, 41% received financial aid in the form of either food stamps, commodities and/or public assistance. Twenty-six per cent were black. The ages of the infants at the time of interview were:

1 month	12 (4%)
2-3 months	83 (27%)
4-5 months	70 (23%)
6-11 months	119 (38%)
12-24 months	26 (8%)

With respect to feeding practices after hospital discharge (Table 5), 85% of mothers surveyed used the same formula at home as was offered in the hospital nursery. Of the 31 mothers who breast fed their babies in the hospital, 10 changed immediately to formula when they arrived home. Thirty-eight per cent of all babies received iron fortified formula or iron supplement after discharge from the nursery. It is interesting that 17 (5%) babies received both iron fortified formula and iron supplement.

A representative, average "Kentucky Infant Feeding Schedule" has been constructed based on responses of 310 mothers interviewed (Table 6). Forty-one per cent of mothers make the change to homogenized milk by six months of age (Table 7).

Table 3

## Formula Availability in 439 Stores

Formula Package	Country and Corner Stores	Discount and Supermarkets	Drugstores
Evaporated milk, 13 oz can	217 (85%)	*	3 (5%)
Powder, 1 lb can	8 (3%)	17 (14%)	38 (58%)
Liquid concentrate, 13 oz can	135 (53%)	108 (91%)	61 (94%)
Ready-to-use, 32 oz can	33 (13%)	93 (78%)	55 (85%)
Ready-to-use, 8 oz	4 (2%)	7 (6%)	17 (26%)
Disposable, 8 oz	2 (1%)	37 (31%)	22 (34%)
Disposable, 6 oz	1	6 (5%)	19 (29%)
Disposable, 4 oz bottle		8 (7%)	26 (40%)
Soy bean formula	1	13 (11%)	48 (74%)
"Sucrose" formula			13 (20%)
Oral electrolyte formula			3 (5%)

\* Evaporated milk is available in most supermarkets, located on a shelf separate from the infant formulas. We overlooked this fact in briefing our interviewers.

## Discussion

Most Kentucky hospital nurseries use a disposable formula system which has obvious advantages for nursery personnel and hospital administration. Many hospitals use a single formula system for an economic reason; a single formula system is often supplied at greatly reduced cost to the hospital. Of course, the greatest advantage to the use of a single formula system is gained by the formula manufacturers.

At least 85% of Kentucky babies drink proprietary formulas for an average of 5.2 months. If liquid concentrate formula is used, a conservative yearly cost to Kentucky families is approximately three million dollars.

51,000 babies (85% Ky. live births, 1971)	
x158 days (5.2 months)	
8,058,000	(annual total Ky. baby-drinking days)
.37	(cost/day liquid conc.)
\$2,981,460.00	

The free going home formula pack influences and reinforces mother's choice of formula for her baby. Mothers are reluctant to change formula when they "have a good thing going" as shown by 85% of mothers surveyed who used the same formula at home as that provided by the hospital nursery.

The going home pack may also influence the formula packaging that mother chooses. Recently, the 32 ounce can ready-to-use formula is included in the going home pack. We are aware that more mothers in our clinic are using the 32 ounce can ready-to-use formula which comes off the counter at almost twice the cost of the liquid concentrate. Differences in daily cost of the infant formula according to packaging has been pointed out,

Table 4

Cost/Day of Various Formulas	
Formula Package	Cost/Day
Evaporated milk, 13 oz can	\$ .22 to .23
Powder, 1 lb can	.31 to .34
Liquid concentrate, 13 oz can*	.34 to .42
Ready-to-use, 32 oz can	.49 to .60
Ready-to-use, 8 oz	.62
Disposable, 8 oz	.70 to .96
Disposable, 6 oz	1.17
Disposable, 4 oz bottle	1.53
Soy bean formula	.49 to .52
"Sucrose" formula	.70
Oral electrolyte solution	.99

\* There is no cost difference between plain and iron fortified liquid concentrate formulas.

Table 5

## At-Home Use of Formula

Same milk as in hospital	262 (85%)
Different brand of formula*	27 (10%)
Changed to evaporated milk	8 (2%)
Changed to iron fortified formula	91 (30%)
Received iron supplement only	24 (8%)
Received iron supplement and iron fortified formula	17 (5%)

\*6 infants changed to soybean or "sucrose" formula.

enthusiastically to parents in our well baby counseling. In spite of this effort, it is our experience that there is increasing preference among our clinic population for the 32 ounce ready-to-use can.

It is distressing that less than half of the nurseries surveyed routinely use an iron fortified formula for the newborn, as has been recommended by the American Academy of Pediatrics Council on Nutrition.<sup>1</sup> This is of no great consequence during the few days of hospitalization after delivery, but at home the mother is more likely to choose an iron fortified formula if this is what the nursery has used.

Comprehensive in-hospital infant feeding instructions are given to mothers in many maternity units throughout the state. However, some hospitals provide instructions which are learned only if mother reads the "nursery handout." This survey indicates that adequate infant feeding instructions are not generally given to mothers in the hospital. There are many effective methods of providing this instruction to mother. We have found the audio-visual units of instruction that can be viewed prior to individual or classroom discussion led by nursery or maternity personnel to be most effective. Some pediatricians have found it practical and effective to employ a nurse associate to deliver all in-hospital infant care instruction.

Evaporated milk formula and breast feeding are no longer the standard feeding practices for Kentucky infants. Kentucky babies are fed a proprietary formula for an average of 5.2 months. Since only 38% of Kentucky babies receive iron fortified milk during these early months, our baby population falls quite short of the American Academy of Pediatrics recommendation to keep babies on iron fortified milk during the entire first year of life.



The "1971 Average Kentucky Infant Feeding Schedule" constructed from the responses of 310 mothers interviewed is in sharp contrast to the schedule that Isador Raphael, M.D., published 40 years ago.<sup>2</sup>

#### METHOD OF ISADOR RAPHAEL — 1931

6 weeks	orange juice
2 months	cod liver oil
5 months	cereal
6 months	vegetables
7 months	egg yolk
8 months	apple sauce, prune pulp
10 months	beef juice, peas, string beans, cabbage
12 months	cow milk, whole eggs, bacon
1 to 2 years	meats, milk desserts

The very early introduction of solid foods is, no doubt, well tolerated by Kentucky babies. We are unable, however, to locate any clear documentation that this practice is beneficial and necessary.

**Table 6**

Average Age Foods Started in Ky. Babies

cereal	1.1 mos.	(1 wk.- 3 mos.)
fruit	1.7	(1 wk.- 5 mos.)
vegetables	1.9	(1 mo.- 5 mos.)
egg yolk	3.2	(2 wk.- 8 mos.)
meat	3.3	(2 wk.- 8 mos.)
homogenized milk	5.2	(2 wk.-12 mos.)
table foods	5.3	(1 mo.-11 mos.)

#### Recommendations

On the basis of this survey, the following recommendations are made:

1. Provide a comprehensive infant feeding instruction program for mothers in your hospital nursery.
2. Use iron fortified formulas in all Kentucky hospital nurseries.
3. In the hospital, make recommendation

**Table 7**

Age Formula Changed to Homogenized Milk

AGE	INFANTS	(%) On HOMOGENIZED
first month	12	none
2nd and 3rd months	83	11 ( 13 % )
4th and 5th months	70	29 ( 41 % )
6th through 11th month	119	95 ( 80 % )
12 to 24 months	26	26 (100 % )

to mother to use iron fortified formula for the first year of life.

4. Provide a practical going home pack that includes one 13 oz. can of liquid concentrate (iron fortified) and 2 disposable bottles of formula.

5. Inform mothers that the chief determinant of infant formula cost is the type of packaging.

6. Make certain that the iron fortified formula that you recommend to mother is available locally; and inform mothers that another iron fortified formula may be substituted if necessary.

7. Health professionals and manufacturers of infant formulas should point out to proprietors of corner and country stores the importance of stocking iron fortified infant formula in liquid concentrate form.

#### Acknowledgement

We are grateful for the help and support of several members of the Kentucky Public Health Department, many public health nurses, home economic students and the Rowan County Nutrition Committee.

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# Gonococcal Septicemia

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*This is a case of gonococcal septicemia with typical clinical manifestations. Diagnosis was confirmed by positive blood and skin lesion cultures. A discussion of disseminated gonococcal infection follows.*

## Case Report

A 32-YEAR-OLD truck mechanic presented with headache, chills and fever. On one occasion during the previous week he noted pain and erythema along the extensor hallucis longus tendon of his left foot which cleared in two to three days. Five days prior to admission he had the onset of fever to 105°, chills and diaphoresis. He treated himself with ASA, bedrest and fluids, and symptoms subsided spontaneously. Four days prior to admission he noted showers of small pustular lesions over both anterior tibial regions. These subsided without treatment within 48 hours. Two days prior to admission he had chills and fever which lasted for six hours.

He admitted to frequent extramarital intercourse and had been treated for "G. C." on at least ten occasions in the preceding five years. Several of these had been documented by gram stain, the most recent infection having been 10 weeks before and treated with I. M. penicillin. The last sexual contact had been ten days prior to admission.

Examination revealed an oral temperature of 103°, blood pressure 120/60, pulse 120 and respirations 16. There was an elevated, circumscribed lesion near the base of the right index finger. It measured 1.5 cm in diameter, was violaceous and contained a small necrotic center. There were small vesiculo-pustular lesions seen on the right palm, near the left clavicle, and in the interdigital space between the second and third toes of the left foot.

There were two circular 5 x 5 mm reddish macules on the dorsum of the right hand and right thigh respectively. HEENT was non-remarkable. The neck was supple without thyromegaly or adenopathy. Lungs were clear to auscultation.

There was a regular rhythm with tachycardia and without thrills, heaves or murmurs. The abdomen was protuberant without scars or striae. There was no organomegaly or masses, and bowel sounds were normal; no rubs were heard in the right upper quadrant. Rectal and prostate examinations were negative. Genitourinary examination showed bilaterally descended testicles without tenderness, swelling or masses. There was no urethral discharge and no penile lesions. Thorough joint examination revealed no pain, swelling, erythema or effusion. Neurological examination was within normal limits.

## Laboratory Data

WBC - 14,600 with 76% PMN cells, 11 bands, 4 lymphs, 6 monos., 1 eos, 1 baso; urinalysis - pH 5.5, negative for albumin, glucose, bacteria, 1-2 RBC, 2 WBC; electrocardiogram and chest x-ray were within normal limits; VDRL was non-reactive; SMA-18 was within normal limits. Wright stain of one of the vesiculo-pustular lesions showed gram-negative intracellular diplococci. Culture of the lesion involving the index finger using Thayer Martin Medium grew *Neisseria Gonorrhoeae*. Three of the five blood cultures grew *Neisseria Gonorrhoeae*. G. C. antibody titer was negative. Rectal culture failed to grow organisms.

## Clinical Course

Following blood cultures the patient was treated with Aqueous penicillin, 5 million units I.V. q. 6 hrs. along with I.V. fluids and ASA. Within 24 hours he was afebrile and asymptomatic. Penicillin was continued for 10 days. On the day of discharge the WBC was 7,900 with normal differential and blood cultures

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times four failed to grow organisms.

### Comment

Several features of this case require comment. The patient was a young man with a history of frequent sexual contacts and had been treated previously for gonorrhea. Chills and fever represented the first stage of disseminated infection with bacteremia culminating in multiple skin lesions signifying septic emboli. He had pain along an extensor tendon which probably resulted from a transient tenosynovitis. Search for skin lesions showed a circular hemorrhagic lesion of the right index finger with a reactive center and multiple skin lesions in various stages of development. Temperature elevation, tachycardia, elevated WBC with a left shift pointed to an acute bacterial infection. The negative G. C. antibody titer using a fluorescent technique was expected since this test is usually positive only in the presence of an active arthritis. Blood cultures and skin cultures were conclusive for the diagnosis.

The ultimate proof of diagnosis in such cases rests on the isolation of *Neisseria Gonorrhoeae* from blood, spinal fluid, synovial fluid, skin or anogenital areas. It is unusual to get positive cultures from skin lesions themselves<sup>1</sup>. Negative cultures may represent study of older lesions or poor techniques and it has been recommended that an entire lesion be taken for cultures by biopsy<sup>2</sup>.

### Discussion

In the past decade, the reported cases of gonorrhea in the United States have more than doubled and it has been estimated that in excess of 2,000,000 cases per year actually occur<sup>3</sup>. With the progressive increase in incidence there is bound to be an increase in the systemic complications of gonorrhea. *N.*

*gonorrhoeae* may invade the blood stream and cause septicemia, arthritis, osteomyelitis, endocarditis and meningitis<sup>4</sup>. Skin manifestations are the hallmark of blood borne infection.

A variety of skin lesions may occur. Maculopapular eruptions, urticaria, diffuse erythema, purpura, multiple subcutaneous abscesses, erythema multiforme and erythema nodosum have been reported<sup>5</sup>. The most common progression is from small red papules or petechiae. These then become vesicular, then pustular and eventually progress to small hemorrhagic bullae<sup>6</sup>.

In those patients who develop disseminated gonococcal infection, the first stage is usually one of septicemia with resultant febrile illness, polyarthralgia and positive culture of *N. gonorrhoeae* from affected joints. More serious complications are myocarditis, pericarditis and endocarditis. Although endocarditis is least common, it probably accounts for the greatest mortality.

The drug of choice in the treatment of disseminated gonococcal infection is penicillin. Most patients will respond to either aqueous or procaine penicillin given in doses ranging from 2.4 to 20 million units daily depending on the particular manifestations and systems involved. For the most complete review covering all aspects of disseminated gonococcal infection, the authors refer to K. K. Holmes, et. al<sup>7</sup>.

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# Medical Progress

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## Current Treatment of Venereal Diseases

LAFAYETTE G. OWEN, M.D.\*

**A**CCORDING to Public Health Service records, the reported cases of primary and secondary syphilis have increased for the third straight year so that the total number of cases reported in 1972 represented the greatest number of cases reported since 1950. The primary and secondary stages are usually over within six months to a year after the disease has been acquired. It is during these stages that syphilis is highly infectious and easily spread by sexual contact. After the early lesion stages are over, an infected person enters the latent stage, during which there are no outward manifestations and syphilis is detected only by a serologic test (a positive spinal fluid would represent asymptomatic neurosyphilis and not latent syphilis).

All sex contacts to infectious syphilis who are clinically negative, should be given preventive treatment consisting of 2,400,000 units of Benzathine Penicillin G.

Gonorrhea is the most frequently reported communicable disease. During 1972, the incidence continued to increase and reached a total nearly double that of five years ago. Because males generally develop symptoms of urethral gonorrhea after acquiring the disease and the majority of them seek medical care, the trend of reported male cases is considered a rough indication of the trend of gonorrhea in the population. Reported male gonorrhea increased 10.1% in 1972. Because clinical signs or symptoms are lacking in the majority of women with gonorrhea, many cases remain undetected and untreated. The 27.2% increase in reported female cases in 1972 was undoubtedly in-

fluenced by intensified casefinding carried out in several areas where programs were established for screening asymptomatic women.

### Treatment of Gonorrhea

**Treatment of uncomplicated gonorrhea** (urethral, cervical, rectal or pharyngeal)—Penicillin G or Ampicillin is the preferred drug for the treatment of gonorrhea.

*Parenteral* — Men or women—Aqueous Procaine Penicillin G, 4.8 million units intramuscularly divided into at least two doses and injected at different sites at one visit, together with 1 gm of oral probenecid, preferably given at least 30 minutes prior to the injection.

*Oral* — Men or women—ampicillin, 3.5 gm, with probenecid, 1 gm, administered simultaneously. Patients with known exposure to gonorrhea (contacts) should receive the same treatment as those known to have gonorrhea.

**Alternate treatment of gonorrhea** (when above schedules are ineffective or allergy exists):

*Parenteral* — Men—Spectinomycin, 2 gm, in one intramuscular injection. Women—Spectinomycin, 4 gm, in one intramuscular injection.

*Oral* — Men or women—Tetracycline HCl, 1.5 gm initially, followed by 0.5 gm four times a day for four days, a total dosage of 9 gm.

**Gonorrhea follow-up:** It is desirable that follow-up urethral cultures be obtained from males seven days after completion of treatment; it is desirable that cervical and rectal cultures be obtained from females seven to fourteen days after completion of treatment.

**Treatment of Complications:** Although treatment of complications (gonococcal salpingitis, bacteremia, arthritis, etc.) must be in-

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dividualized, repeated large parenteral doses of Aqueous Crystalline Penicillin G have been shown to be effective. The efficacy of alternative antibiotic regimens is unproven.

All gonorrhea patients should have a sero-

logic test for syphilis at the time of diagnosis. While long-acting forms of Penicillin (such as Benzathine Penicillin G) are effective in syphilotherapy, they have NO place in the treatment of gonorrhea.

**Table 1**  
SYPHILIS TREATMENT SCHEDULE

STAGE	DRUG	TOTAL DOSAGE*	NUMBER OF DOSES	INTERVAL
Primary and Secondary	Benzathine Penicillin G or PAM	2.4 4.8	1 3	2.4 in one injection or 1.2 in each buttock 2.4 1st injection followed by 1.2 at successive 3-day intervals
	or Aqueous Procaine Penicillin G	4.8	8	600,000 units daily
Latent	Benzathine Penicillin G	2.4	1	2.4 in one injection if CSF examination is negative
	Benzathine Penicillin G	4.8	2	2.4 in each injection one week apart if CSF examination is not done
	or PAM	4.8	3	2.4 1st injection followed by 1.2 at successive 3-day intervals.
	or Aqueous Procaine Penicillin G	4.8	8	600,000 units daily
Neuro Cardio Other Late	Benzathine Penicillin G or PAM	6.0 to 9.0 6.0 to 9.0	3 to 4 5 to 8	2.4 each injection 7 days apart 2.4 1st injection followed by 1.2 at successive 3-day intervals
	or Aqueous Procaine Penicillin G	6.0 to 9.0	10 to 15	600,000 units daily
Congenital Early (less than 2 yrs.)	Aqueous Procaine G			50,000 units per pound of body weight; total dosage administered in 10 equally divided daily injections.
Late (over 2 yrs.)	Benzathine Penicillin G			If CSF is nonreactive, treat as latent; if CSF is reactive, treat as neurosyphilis

\* Expressed in million units unless otherwise noted.

ALTERNATE TREATMENT FOR SYPHILIS: Penicillin sensitive patients—Erythromycin or tetracycline 30-40 grams administered over a period of 10 to 15 days. Erythromycin is preferred in pregnancy as tetracycline may result in dental abnormalities in the infant.

**Table 2**  
OTHER VENEREAL DISEASE TREATMENT SCHEDULE

DISEASE	DRUG	DOSAGE	NOTE
Chancroid	Triple Sulfonamides	1 gram 4 times a day for 7 to 14 days	Recurrence is common. Repeat course if necessary.
Lympho-Granuloma Venereum	Sulfonamides Tetracycline	1 gram every 6 hours for 5 to 10 days 250 to 500 mg every 6 hrs for a total of 20 to 60 grams	
Granuloma Inguinale	Tetracycline or Ampicillin	500 mg every 6 hrs until healing is complete	



# GRAND ROUNDS



The University of Louisville School of Medicine

This Journal feature will be presented alternately by the University of Louisville and the University of Kentucky Departments of Medicine and Departments of Surgery. We hope to have these features revolve around subjects of immediate practical interest to the practicing physician; and, for those of us not able to attend grand rounds in the teaching centers as often as we might, we hope this will represent a bit of a refresher course.

## Hyperkalemia—A Medical Emergency

**I**N November, 1972, a 29-year-old female was admitted to another hospital with a three weeks' history of a "flu-like" illness associated with lethargy, anorexia, nausea and occasional vomiting.

She gave a history of nocturia for the past 18 months. Two years prior to the present illness she noticed swelling of the ankles and a rash on the right leg. The blood urea nitrogen was 18 mg/100 ml, serum creatinine 1.2 mg/100 ml and the potassium 4.3 mEq/L. Urinalysis revealed 3+ proteinuria. An intravenous pyelogram was normal. A renal biopsy was interpreted as compatible with lupus nephritis, though repeated LE-cell preparations and anti-nuclear antibodies were negative. Since then she has been treated with prednisone. In June, 1971, she had a total hysterectomy for menorrhagia. A vaginal discharge has been present intermittently.

On examination she was slightly anemic. The pulse rate was 96 per minute and regular. B.P. 110/70 mm Hg. No abnormality was detected in the lungs, heart and abdomen. The hematocrit was 30%, and the white cell count 10,600 with 90% neutrophils. The blood urea nitrogen was 95 mg, serum creatinine 5.1 mg, serum calcium 7.6 mg, serum phosphorus 7.5 mg, and the blood uric acid 11.0 mg/100 ml. Blood electrolytes showed a sodium of 138 mEq, potassium 6.3 mEq, chloride 99 mEq, and the CO<sub>2</sub> content 18.5 mEq/L. A chest x-ray, upper gastrointestinal series and barium enema were normal. She was treated with prednisone, ampicillin and phenegan. During the next few days she became more tired and anorexic. Two units of blood were transfused. Twenty-four hours later her condition deteriorated and the University of Louis-

ville Renal Service was asked to see her in emergency consultation.

On examination she appeared normally hydrated. She was drowsy and showed marked generalized twitching. She felt extremely weak and exhausted. She had noticed increased muscular weakness manifested by difficulty in walking and getting out of bed in the previous 36 hours. The pulse rate was 110/min. B.P. 105/70 mm Hg. All the peripheral reflexes were brisk. No abnormality was detected in the heart, lungs and abdomen. The serum sodium was 135 mEq, the potassium 10.6 mEq, the chloride 96, and the CO<sub>2</sub> content 11 mEq/L. The blood glucose was 90 mg/100 ml. An electrocardiogram revealed a rate of 110/min., absent P waves, widened QRS complex and tall peaked T waves. (Figure 1). Sodium bicarbonate 100 mEq, 10 cc of 10% calcium gluconate, and 50 cc of 50% dextrose with 20 units of regular insulin were given intravenously. In addition, 30 G of Kayexalate (brand of sodium polystyrene sulfonate USP) mixed with Mannitol was given as an enema as she was unable, because of nausea and vomiting, to take medications by mouth. During the next four hours her serum potassium fell to 6.6 mEq/L and there was marked improvement in the electrocardiogram. At this stage she was transferred to the intensive care unit of another hospital. On the following morning the serum potassium was 4.3 mEq, the sodium 135 mEq, the chloride 98 mEq, and the CO<sub>2</sub> content 17 mEq/L. Subsequent investigations revealed a negative urine culture, normal plasma proteins and a 24-hour urinary protein of 800 mg. She was placed on a low potassium diet without protein, sodium or fluid restriction. Prednisone was gradually discontinued.



## Discussion

This young housewife with moderately advanced renal failure due to chronic interstitial nephritis developed acute hyperkalemia associated with markedly abnormal electrocardiographic changes. A preventable death might have been the consequence of a further delay in the treatment of this hyperkalemia.

Potassium is the major intracellular cation. Intracellular volume is regulated by the ability of cells to accumulate potassium and extrude sodium in the presence of large amounts of sodium and small amounts of potassium in the interstitial fluid. Only 3% of total body potassium is extracellular, but this small fraction is vital in regulating neuromuscular function.

Potassium is both reabsorbed and secreted by the kidney. Most of the filtered potassium is actively reabsorbed in the proximal convoluted tubule. Potassium may enter the descending limb of the loop of Henle as it passes down into the hypertonic outer medulla, however most of the potassium measured in the urine enters in the distal convoluted tubule by a passive process of secretion down an electrochemical gradient. This membrane potential is a consequence of the active transport of sodium from the distal convoluted tubule under the influence of aldosterone. Any factor which increases the electronegativity of the luminal fluid will increase potassium secretion.

The excitability of nerves and muscles depends upon the difference between the resting membrane potential and the threshold potential. The membrane potential is influenced by the ratio of intracellular to extracellular concentrations of potassium. An excess of potassium in the body distributes itself approximately evenly over the total body water. With hyperkalemia nerve and muscle cell membrane potentials are depolarized and hyperexcitability exists. Such depolarization and hyperexcitability accounts for the flaccid paralysis and cardiac arrhythmias that occur with hyperkalemia. In addition to potassium, other factors affect the neuromuscular excitability. These would include the rate of development of potassium excess, the concentration of ionized calcium, and the acid-base status of the individual.

With normal renal function it is difficult to induce hyperkalemia because of the very efficient renal tubular secretory process—excepting the rapid infusion of a potassium-containing

solution. Only in the presence of a decreased capacity to excrete potassium can overloading and intoxication occur. Renal failure, either acute or chronic, associated with a reduction in glomerular filtration rate or decreased perfusion of the kidneys from any cause, such as dehydration or adrenal cortical insufficiency may be associated with conditions which limit the ability of the kidney to secrete potassium. Infected, ischemic or damaged tissues anywhere in the body may, in the presence of renal failure, create a situation in which hyperkalemia can quickly develop and cause death.

Hyponatremia, hypocalcemia and acidosis increase the dangerous effects of hyperkalemia. The electrocardiographic changes are related to the duration and degree of the hyperkalemia. Initially, a tall peaked T-wave followed by depression of the S-T segment may occur. A prolonged PR interval with progressive widening of the QRS complex and formation of a

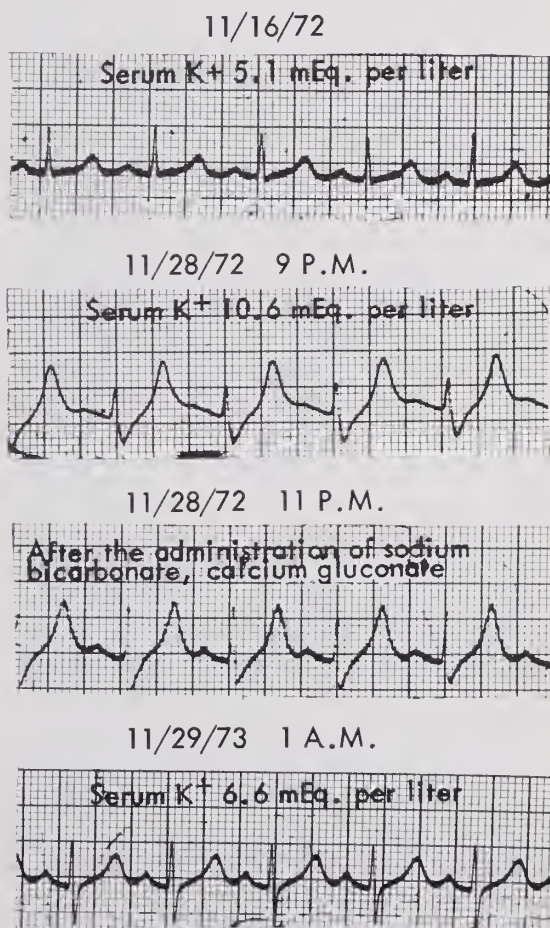


FIG. 1—Lead II tracings showing electrocardiographic changes in severe hyperkalemia and its correction with a fall in serum potassium.

sine-wave configuration will occur. Ectopic ventricular beats, bradycardia and other arrhythmias may precede death from ventricular standstill or fibrillation.

In the patient under discussion today, the co-existence of chronic renal failure, pelvic inflammatory disease and a recent blood transfusion together with a possible, but undocumented, high dietary potassium intake may all have contributed to a serum potassium of 10.6 mEq/L. Stored transfused blood may have a potassium concentration of over 30 mEq/L due to potassium migrating from red blood cells into plasma. Potassium released from hemolyzed cells following a gastrointestinal hemorrhage or from a large hematoma places the patient with renal failure at considerable risk.

### Therapy

When the plasma potassium is less than 6.5 mEq/L, this can often be simply managed by restriction of potassium intake and increasing dietary sodium. Hyperkalemia greater than 6.5 mEq requires more urgent and energetic treatment. If the EKG shows cardiac toxicity, calcium infusion in the form of 20 ml of 10% calcium gluconate is given intravenously under EKG control. This reversal of cardiac toxicity is relatively transient and other measures are needed in addition. Hypertonic glucose in the form of 50 ml of 50% glucose or 500 ml of 10% glucose can be given as an intravenous injection or a slower intravenous infusion over 30 minutes. This is often combined with regular insulin but is probably only necessary in diabetic patients, as the infusion of hypertonic glucose stimulates the secretion of insulin from the pancreas. Insulin and glucose cause the transfer of potassium from plasma into cells by altering cell membrane permeability and by increasing the deposition of glycogen in cells. In the presence of metabolic acidosis the rapid intravenous infusion of sodium bicarbonate will also cause potassium to be transported into cells. With hyponatremia or volume depletion intravenous hypertonic sodium infusions appear to be beneficial. The preceding therapeutic maneuvers are all of the temporary nature and more permanent lowering of total body potassium can be brought about by use of cation exchange resins in the sodium or calcium cycle.

Sodium polystyrene sulfonate (Kayexalate) 30 gms given by mouth three or four times a day in 25 ml of a 70% Sorbitol solution will cause the binding of potassium in the gut and by promoting loose stools will accelerate the excretion of this potassium. The resin can be given as a retention enema: 60 gms of resin in 50 ml of 70% Sorbitol suspended in tap-water and retained for 30 minutes is effective in rapidly lowering serum potassium. It should be noted that one or two mEq of sodium are absorbed for every gram of resin taken by mouth. This additional sodium load can precipitate heart failure or pulmonary edema. However, often the diarrheal effect of Sorbitol or Mannitol is effective in eliminating the additional sodium load. In the absence of Sorbitol there is a risk of constipation and fecal impaction.

Hemodialysis and peritoneal dialysis are also effective in removing potassium but are slower than the preceding methods. However, in the presence of hypercatabolic states associated with renal failure, dialysis may be essential to correct severe hyperkalemia. In addition, other complicating electrolyte disorders, uremia and fluid overload can be corrected by dialytic methods.

*A Physician:* With the therapy you have just described is it possible to overshoot and produce hypokalemia?

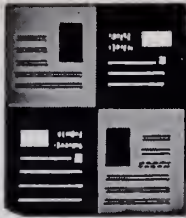
*Doctor Martin:* With careful frequent biochemical and electrocardiographic monitoring this should not happen. It is especially important to avoid hypokalemia if the patient has recently received digitalis.

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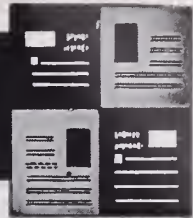
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## SPECIAL ARTICLES



# Interprofessional Code

KENTUCKY MEDICAL ASSOCIATION

AND

KENTUCKY STATE BAR ASSOCIATION

### PREAMBLE

#### General Principles

Doctors of medicine and attorneys at law, as members of two professions possessing a close personal relationship with those they serve, have established principles of ethics applicable to the traditions and requirements of their respective callings.

The physician has responsibility for the care of the individual, in health as in disease. He must minister to his patient's needs to the best of his ability and in accordance with the high precepts of the Hippocratic Oath.

The attorney is an officer of the court, sworn to support the Constitution of the United States and of the state or states in which he is admitted to practice. As is the physician, he also is pledged to maintain the confidence and to preserve inviolate the secrets of his clients. He will not reject, from any consideration personal to himself, the cause of the defenseless or oppressed, nor delay any man's cause for lucre or malice.

The attorney represents his client as advisor and confidant, as his advocate in legal proceedings and as negotiator in the business and personal affairs of his client. The physician's relationship is parallel, for he is also the advisor and confidant of his patient in matters of health.

#### Interprofessional Relations

Each profession is obligated by its own stature to respect and honor the calling of the

other. Neither the fact nor the appearance of incompetence, corruption, dishonesty, or unethical conduct on the part of individual members of either profession can be tolerated. It follows then that each profession must vigorously support within its own ranks, as well as in the ranks of the other, those ethical concepts which each has found necessary in the public good. One who has chosen to be a physician or an attorney and has been found competent to be such by appropriate authorities, is vested with high responsibilities and privileges to enable him to serve the public with honor, with dignity, and with effectiveness.

#### This Code

A statement of ethical principles states a guide to the attainment of the best in interprofessional conduct and practices. IT IS NOT NECESSARILY OF A BINDING CHARACTER, NOR CAN IT BE SO DETAILED TO COVER EVERY CIRCUMSTANCE.

This Interprofessional Code constitutes the further recognition that with the great developments in the science and art of both medicine and law, it is inevitable that the physician and the attorney are drawn into steadily increasing association, as the law calls with increasing frequency upon medicine for its scientific knowledge and for its evaluation of facts so that the rights of individuals and of the government may be appropriately determined before various tribunals.

## I. RECIPROCAL DUTIES

### A. THE ATTENDING PHYSICIAN AND HIS PATIENT

The medical profession affirms the obligation of a patient's attending physician to cooperate willingly with the patient's attorney in supplying facts, primarily available only to him. The physician should accept the further responsibility of explaining such facts in such a manner that the attorney understands them and can determine their relationship to his client's cause. There should be complete cooperation between the physician and the attorney, each assuming his proper responsibility.

It is for the physician to determine the actuality or probability of fact pertaining to his patient's medical condition. It is for the attorney to determine how and under what circumstances such facts are to be appropriately presented.

A physician should never advise on the amount of damages a patient should seek to recover. The proper province of his professional advice is the extent, degree, or percentage of illness, injury, disability, or similar judgments based upon his professional knowledge of the case. He is not expected to understand technical rules of legal liability, or evidence, or of trial techniques. The latter are the exclusive province of the attorney.

### B. THE ATTORNEY AND HIS CLIENT

It is important that the physician understand that legal proceedings in this country are conducted under what is known as the "adversary system." Under that system the attorney occupies a dual position. He is not alone an officer of the court. He is also the single-minded advocate for his client. He does not and cannot properly represent both sides to a dispute.

This system has developed in recognition of the truth demonstrated countless times that justice can usually be satisfactorily accomplished if the two or more contestants can present their points of view to some neutral third person who can weigh the opposing claims. Such claims are usually presented in the form of testimony which is offered in question and answer form. The judge of a court or the officer presiding before an administrative

tribunal is the referee who weighs the opposing points of view and the conflicts in testimony. In a sense the judge or administrative officer much more nearly approximates the physician in objectivity. The physician well knows, however, that in some situations it is also possible for medical men to vary honestly and sincerely in their physical findings, their treatment, and their evaluation of illness or injury. In some types of court cases the parties prefer to let a group of sworn put interested citizens, the jury, weigh and "find" the facts.

## II. MEDICAL EXAMINATIONS

(Requested by Attorneys or ordered by Court)

### A. GENERAL

1. The law provides that a party to a lawsuit may be required to undergo a medical examination by agreement of the opposing attorneys or under a court order.

2. When an appointment is made for the medical examination of a person, the physician sets aside a part of his day for that purpose. It is, therefore, important that attorneys exert their best efforts to insure that such appointments are kept. The attorney for the party to be examined should give explicit instructions to such party that the physician must be notified in ample time.

### B. SCOPE OF EXAMINATION

1. The physician may take a history and perform such examinations as may be advisable in his judgment to formulate an informed opinion regarding the nature and extent of the party's medical condition.

2. Inquiries should not be made by the physician into matters not reasonably related to the legitimate scope of the medical examination.

3. The physician, following his examination, shall reduce to writing a medical report, following the outline set forth in Section III.B.5. herein. The original report shall be forwarded to the court or person requesting the examination, with copies as directed by the court or by the person requesting the examination.

## III. WRITTEN MEDICAL REPORTS

(Prepared for Courts or Attorneys)



## A. THE ATTORNEY

1. Requests for reports from a physician should be made in writing as soon as it is known that the information is needed. The request should be clear as to the specific information desired and the report should be prepared by the physician as promptly as possible.

2. If a report is requested on a physician's patient, the attorney must provide the physician with a written authorization from the patient.

## B. THE PHYSICIAN

1. **Medical Records.** The physician must keep records adequate to supply a patient's attorney all pertinent information regarding the patient-client's medical history.

2. Requests for medical reports should be honored promptly. Undue delays in providing medical reports or bills bearing on a patient's legal rights may prejudice his case.

3. If a physician is unable to make a complete medical evaluation within the time required, he should notify the attorney. In this event, a preliminary report clearly designated as such may serve the attorney's needs until a complete evaluation can be rendered.

4. **Patient's Authorization.** The physician must have his patient's written authorization before releasing any report or test concerning the patient. Such authorization is not necessary when the person examined is not a patient of the physician, and the examination is made in connection with a legal claim.

5. **Content of Report.** The following, where applicable, should be included in the report:

- a. Time, date and place of first visit.
- b. Accurate history of the injury or medical condition, including pre-existing disease or prior injury.
- c. Nature of examination and findings.
- d. Results of laboratory work, x-rays, and consultations.
- e. Opinion including, where possible, diagnosis and prognosis. *Upon request*, the opinion should also evaluate future physical impairment, necessity for future treatment or surgery, the effect of aggravation of any pre-existing disease or prior injury, and length of convalescence. The opinion should likewise include the physician's true opinion on the cause of the patient's condition, and the strength of his opinion in evaluating the cause. In this regard, he should consider and state all objective and subjective matters bearing on this opinion, including, where appropriate, his evaluation of the patient's candor when con-

sidered in the light of his own medical knowledge.

f. State if patient's condition is stationary, or if the patient is discharged.

g. Subsequent examination: Include complaints and evaluation of condition, nature of treatment, confinement to hospital or home, referrals to other physicians, patient's progress, results of x-rays, ECGs, EEGs, laboratory work and consultations, and a concluding diagnosis and prognosis (see Item e. above).

h. Enclose separately an itemized statement of medical expense to date. Omit charges for medical reports or attorney consultations or ANY REFERENCE TO INSURANCE.

i. Include estimate of cost of future medical care.

## IV. CONFERENCES

The physician and the attorney should confer relative to the common problems presented in a particular case. Such conferences should be arranged well in advance of court or other hearing at the mutual convenience of each, in full appreciation that to each profession, time is of the utmost importance. No physician and no attorney should be required to spend unnecessary time in arranging or attending such a conference. The attorney who knows and understands the progress of his client's case, the conflict, if any, of its medical aspects, and the probability of settlement or trial should determine the necessity of a conference.

It is unfair to the patient-client, the physician, and the cause of justice to present a medical witness who has not first conferred with the attorney and who, therefore, may lack a full appreciation of the significance to the case of the particular evidence he is being asked to give. It is equally obvious that the attorney is less able to represent the full interest of his client where he has not had the advantage of full conferences with the physician in advance of presenting the case.

## V. DEPOSITIONS AND/OR COURT APPEARANCE

### A. COURT TESTIMONY

Both parties recognize that when it has been determined that the just and proper effect of a physician's testimony cannot be obtained without an oral examination in court, there is a necessity for the dissemination of information to both professions concerning the time problems involved in court testimony. The Medical Association recognizes that the legal profession faces calendar problems, which include the un-

certainty of dates in a fluid trial calendar. The Bar Association likewise recognizes that the physician's appointments are made in advance and that physicians are in addition faced with pressing medical problems which sometimes cannot be deferred.

### 1. Attorney's Duties:

a. The attorney should ascertain whether the physician will be available for a trial term prior to the date assigned for trial at that term. He should not order the attendance of a physician as witness unless necessary and in any case without prior notice and conference concerning the matters as to which he is to be interrogated unless both the attorney and the physician agree that such conference is unnecessary.

b. The attorney should write to the physician immediately following the calendar call to advise the physician of the proposed trial date.

c. The attorney should keep the physician's office advised of the status of the calendar and notify the physician as soon as possible prior to trial of the probable trial date.

d. In the event of settlement or postponement, the physician should be immediately notified of that fact.

e. The attorney should give the physician as much notice as possible of the time when his attendance in court is desired. Physicians should not be asked to appear until the attorney is reasonably certain that they will not have to remain at the courthouse more than a short period of time before being allowed to testify. When the physician enters the court room, he shall, through a court attendant, make his presence known to the attorney trying the case. The attorney shall endeavor to put the physician on the stand as soon as possible after his arrival in the court room subject to orderly and proper presentation of the case.

### 2. Physician's Duties:

a. The physician has a moral and ethical obligation to give testimony regarding his patient. If the physician undertakes the care of a patient and litigation ensues, the physician should recognize his responsibility to testify as to the medical condition of that patient, subject to the provisions of this Agreement.

b. When given adequate notice of the time when he will be called upon to testify, the physician should make himself available at that

time, unless an emergency situation arises which precludes his appearance.

## B. DEPOSITIONS

1. **Physician-Patient Privilege.** Where testimony is given and documents are called for by counsel during the taking of depositions in personal injury lawsuits, the usual obligation of confidence in the physician-patient relationship does not exist, and physicians shall furnish any and all pertinent documents, reports, records, notes or x-rays regarding the patient which are requested by counsel for either party to the lawsuit.

2. **Deposition Defined.** A deposition is an official proceeding authorized by law whereby a physician may be required to give testimony and be cross-examined under oath outside of court before a court reporter who is a notary public and in the presence of attorneys representing the parties. He may be requested to produce pertinent medical records at the deposition hearing. He may also be requested to release the records, x-rays, ECGs, EEGs, etc. to the notary public for duplication and return.

3. **Time and Place.** The time and place of the deposition should be set *by agreement* with the physician. Unless there is a compelling reason to the contrary, it should be taken at the physician's office *at the time agreed, keeping in mind that an attorney's time has the same value as a physician's.*

4. **Subpoena.** If the deposition of a physician cannot be set by agreement, the physician's attendance can be required by subpoena. If any doubt arises as to the effect of any subpoena, the physician should consult his attorney. A physician should not take offense at being served with a subpoena. Our system of justice depends on being able to require any citizen's time at a judicial proceeding and to give testimony regarding the case. A conference should be held between the physician and the attorney proposing to call him as a witness at some time mutually convenient before the physician is to testify.

5. **Subpoenas—Medical Records.** Production of pertinent medical records may also be required by subpoena *duces tecum* served on the physician. That subpoena requires the physician to attend the deposition at the time and place stated in the subpoena, and there to produce the specified records.



#### 6. If Attendance at Deposition A Hardship.

If the time and place described in the subpoena for the deposition creates a hardship, the physician should immediately bring this fact to the attention of counsel taking the deposition.

#### 7. Preparation and Deportment

a. The Physician. Since the testimony given at deposition hearings may be read at the trial, it is important that the physician prior to deposition prepare himself as for trial and that his attitude and deportment at the deposition hearing be similar to that at trial.

b. The Attorney. An attorney should totally prepare his case from the medical-legal standpoint so that with a careful use of words he can reduce the area of misunderstanding. It is not proper for an attorney to seek to color the professional opinion of the physician. No attorney is justified in abusing, badgering or browbeating any witness, including a physician.

8. **Familiarity with Records.** The physician and the attorney should be thoroughly familiar with their own records and with other related records, including hospital charts and records, at the time the deposition is taken and should have as many of the records at the time the deposition is taken as is possible so that they may be referred to as needed.

9. **Predeposition Conference.** It is to be understood that it is proper to have a predeposition conference between the attorney for the patient and the physician to facilitate the taking of the deposition.

#### VI. COMPENSATION FOR MEDICAL REPORTS, DEPOSITIONS AND COURT APPEARANCES

It is impractical to establish precise rules governing a physician's fees for medical reports, depositions and court appearances. It is important, however, that fees be reasonable and it is suggested that they be discussed in advance by the physician and the attorney. In this way, the major cause of misunderstanding and dissatisfaction will be eliminated. **Under no circumstances may a physician charge a fee for an examination or for testifying which is contingent upon the outcome of the lawsuit.**

The attorney should, in every case, seek to protect the interest of the physician and should do everything in his power to see that the physician's bill is paid from any funds that

come into his hands as a result of litigation or claim concerning the injuries sustained by the parties and for which the physician has rendered a service.

As a matter of policy an attorney should not request a physician to testify on deposition or in court, nor should he subpoena him, without making arrangements for reasonable compensation. This is not required by law, but is suggested as a matter of fairness and cooperation between the professions. A physician should be compensated for the time spent away from his professional practice, regardless of whether he is used as a witness.

**The Attorney should promptly notify the physician when the case is settled.**

#### VII. IMPLEMENTATION OF THE CODE

The purpose of this Code is to establish, maintain and perpetuate a greater degree of understanding and ethics between the respective medical and legal professions. Any abuse of this Code or violations thereof by a member of either profession should be brought to the attention of the appropriate committee for a determination to be made as expeditiously as possible. The appropriate committee for the respective profession shall give notice to the person complained of, of the nature and pendency of the complaint.

#### VIII. AMENDMENTS

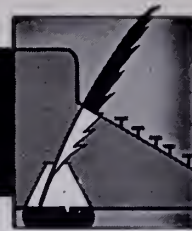
This Code may be amended from time to time upon joint resolution of the respective associations represented herein.

The foregoing Code having been submitted to the Board of Governors of the Kentucky State Bar Association and the Board of Trustees of the Kentucky Medical Association and approved by both of them, NOW THEREFORE we, the chief executive officers of said associations IN WITNESS WHEREOF have hereunto subscribed the names of our respective associations pursuant to authority vested in us as of this the 18th day of April, 1973.

KENTUCKY STATE BAR ASSOCIATION  
William E. Rummage, President  
KENTUCKY MEDICAL ASSOCIATION  
Lec C. Hess, M.D., President



## EDITORIALS



### Medical Malpractice

**W**heezeing a bit, the postman this past Wednesday deposited on my front desk two copies (the second for the sake of emphasis, I suppose) of "Medical Malpractice—Report of the Secretary's Commission on Medical Malpractice". These books totalled about six pounds of closely printed opinion and data, and have made for interesting reading over this past cool and occasionally rainy weekend. For you 'first-paragraph-only' buffs, I'll come right to the point: this HEW Report offers little to alleviate the problem, and its publication was marked by considerable dissension within the Commission itself. It does, however, in a peculiarly randomized fashion, reduce to written form many of the emotional issues involved in our present medical malpractice situation.

It is common knowledge now that any given preconceived opinion can be buttressed at the Federal level by empanelling a Citizen's Commission, spending eighteen months and two million dollars, and publishing the Commission's findings along with an unexpurgated and very bulky Appendix containing a nearly impenetrable forest of source data. The key to obtaining the desired output from such a group, of course, lies in the careful selection of its input—i.e., the composition of the Commission. In this case we find twelve members with law degrees and two described as patient advocates, while only four M.D.s, one D.O., and two R.N.s represent the medical professions. That the overall tone of the Commission's recommendations suggests that the malpractice problem derives largely from physician incompetence, is thus not unexpected. Regrettable, yes. Unexpected, no. (Items: "The Commission finds that the competence of individual providers of health-care affects the overall quality of care." "The Commission recommends that all state medical practice acts include specific authority to State licens-

ing bodies to suspend or revoke licenses for professional incompetence." "The Commission recommends . . . periodic re-registration of physicians, dentists, nurses, and other health professionals, based upon proof of participation in approved continuing medical education." "The Commission recommends that specialty boards periodically re-evaluate and re-certify physicians they have certified." And, "The Commission recommends that all State boards of medical examiners include lay members.")

While the report thus seems to saddle physicians with even more responsibilities, what do we hear from the Commission about responsibilities of the legal profession? Well, for instance, a specific defense of the contingency-fee system (Items: "The Commission finds that . . . there does not appear to be any gross discrepancy between the rates charged by the plaintiff bar and those charged by the defense bar in medical malpractice cases." "The Commission finds that when, under a contingent fee arrangement, a plaintiff attorney loses a case he will have invested a considerable amount of uncompensated time on that case." "The Commission recommends that courts adopt rules and that all states enact legislation requiring a uniform graduated scale of contingent fee rates in all medical malpractice litigation. The contingent fee scale should be one in which the fee rate decreases as the recovery amount increases.") Also, we find concern that there may not be enough malpractice suits, because poor people cannot pay enough to get suits underway ("The Commission recommends that public legal assistance mechanisms be established, or expanded, . . . to assure adequate legal representation to persons with small malpractice claims.") And so forth—

The published conclusions and recommendations of the Commission are accompanied by several "Separate and Dissenting Statements",



of which the most lucid and lengthy is that of Dr. Charles Hoffman, President of AMA. His remarks, and a more emotional but affecting statement by George Northup, D.O., restore a bit of badly needed balance to the proceedings. In sum, though, while this report is at present an interesting piece of reading material, it is one I believe we need not worry about in the future. Written by Commission staff, and published without prior review by

Commission members themselves, its biases, excesses, dissension, confusion, and non-judicial statements must be even more embarrassing to responsible members of the legal profession than it is to us. It says almost everything a plaintiff's attorney could want, but offers very little help to either patient or physician. The assignment might well have been labelled "Mission: Impossible", and the Report will indeed self-destruct. WHJ

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### Have You Moved Recently?

Please send any change of address to *The Journal of the Kentucky Medical Association*, 3532 Ephraim McDowell Drive, Louisville, Kentucky 40205. We need your help in keeping our mailing list up to date. You are our best source of information.

### Notice To Contributors

Members of the Kentucky Medical Association reading papers before other organizations are asked to submit their papers to *The Journal* for consideration by the Editors for publication. Detailed instructions to contributors appear in the Scientific Section of *The Journal* under Manuscript Memos. Please forward any papers to:

Charles C. Smith, Jr., M.D., Scientific Editor  
The Journal of the Kentucky Medical Association  
3532 Ephraim McDowell Drive  
Louisville, Kentucky 40205



## ORGANIZATION SECTION



### 1973 KMA Annual Meeting To Feature Outstanding Speakers, Informative Topics, Color TV Broadcasts On Sept. 18-20

Critical Care Medicine, Pollution, Renal Problems and Sex and its Consequences are themes for the four general scientific sessions of the 1973 KMA Annual Meeting on September 18-20. Guest speakers from across the nation will participate with Kentucky physicians to deliver an outstanding program on subjects that are both timely and informative for today's physician.



Doctor Maloney

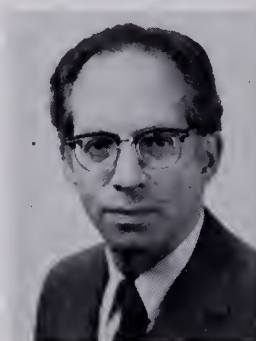


Doctor Friedman

Held, for the first time, at the Bluegrass Convention Center and Ramada Inn in Louisville, the 1973 session will also include meetings of 17 specialty groups, two meetings of the KMA House of Delegates, the President's Luncheon, technical and scientific exhibits, University of Louisville Alumni Reunions, the Annual Convention of the Woman's Auxiliary to KMA, the annual KEMPAC Seminar and numerous miscellaneous meetings to be announced in the Annual Meeting Program Booklet.

The House of Delegates will meet on Monday morning, September 17 and Wednesday evening, September 19. Robert H. Henry, Director of Professional Affairs of the United States Pharmacopeial Convention will be the featured speaker for the 1973 KMA President's Luncheon to be held September 19 at 11:50 a.m.

Dealing with the subject "Noise Pollution—Cause and Effect" at the morning scientific session on September 19, will be Walter H. Maloney, M.D., Cleveland. Doctor Maloney is Associate Professor and Director of Otolaryngology at Case Western Reserve University School of Medicine. A delegate to the AMA Council on Otorhinolaryngology, Doctor Maloney is also Secretary of the American Broncho-Esophageal Association and Editor-in-Chief of "Otolaryngology."



Doctor Pepper



Doctor Bricker

A guest of the Kentucky Kidney Foundation, Eli A. Friedman, M.D., Brooklyn, will speak at the Wednesday afternoon, September 19, session on "Dialysis." Professor of Medicine at Downstate Medical Center, Doctor Friedman is Editor of the National Kidney Foundation Newsletter and serves on the editorial board of *Nephron*.

Lloyd B. Pepper, M.D., Rockville, Md., will also deal with the theme of Renal Problems in discussing "Bladder Cancer of Industrial Etiology." Currently, Doctor Pepper is Associate Commissioner for Science of the Food and Drug Administration. He serves as Chairman of the Committee on Radiological Health of the Industrial Medical Association.

The Professor and Chairman of the Department of Internal Medicine at Albert Einstein College of Medicine in New York City, Neal S. Bricker, M.D., will also speak at the September 19 afternoon session. His topic will be "On the Pathogenesis of Uremia." Doctor Bricker, an active member of the National Kidney Foundation, is the 1972-73 President of the American Society for Clinical Investigation and is a Past President of the American Society of Nephrology.

The American Medical Association has fully accredited this year's scientific program for postgraduate continuing medical education and will provide closed circuit color television scientific program broadcasts to each room at the Ramada Inn from 5 p.m. to 1 a.m. on September 18, 19 and 20.

Information on other speakers and topics will be carried in upcoming issues of *The Journal*. Full details on all meetings relative to the Annual Meeting, including the full scientific program, will be published in the August issue of *The Journal*.



# Integument!

Our skin—the human integument—covers us, defines us, protects us. But skin is subject to cuts, burns, abrasions. And infections. Neosporin Ointment fights infection by providing broad antibacterial action against susceptible skin invaders. It contains antibiotics that are rarely used systemically, reducing the risk of sensitization.

**INDICATIONS:** *Therapeutically*, used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

*Prophylactically*, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

**CONTRAINDICATIONS:** Not for use in the external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

**PRECAUTION:** As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Complete literature available on request from Professional Services Dept. PML.

## NEOSPORIN<sup>®</sup> Ointment

(POLYMYXIN B-BACITRACIN-NEOMYCIN)

Each gram contains: Aerosporin<sup>®</sup> brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg. (equivalent to 3.5 mg. neomycin base); special white petrolatum q.s. In tubes of 1 oz. and ½ oz. and ⅓ oz. (approx.) foil packets.



Wellcome

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# What's in it for her?

All steroid molecules are not the same...in their activity. In prescribing birth-control pills, estrogen/progestogen activity is more important than milligrams. The woman's hormone profile often indicates the activity best for her.

ethinyl estradiol/50 mcg.

mestranol/100 mcg.

ethynodiol diacetate/1 mg.

ethynodiol diacetate/1 mg.

## Typical characteristics of the "balanced" profile

- normal menses
- well-rounded breasts
- clear complexion
- normal figure with normal secondary sex characteristics
- normal cytohormonal pattern

This "center spectrum" pill has had excellent user acceptance for over seven years.

## Ovulen<sup>®</sup>

Available in 20-, 21- and 28-pill schedules  
Each white tablet contains: ethynodiol diacetate 1 mg./mestranol 0.1 mg.  
Each pink tablet in Ovulen-28<sup>®</sup> is a placebo containing no active ingredients.

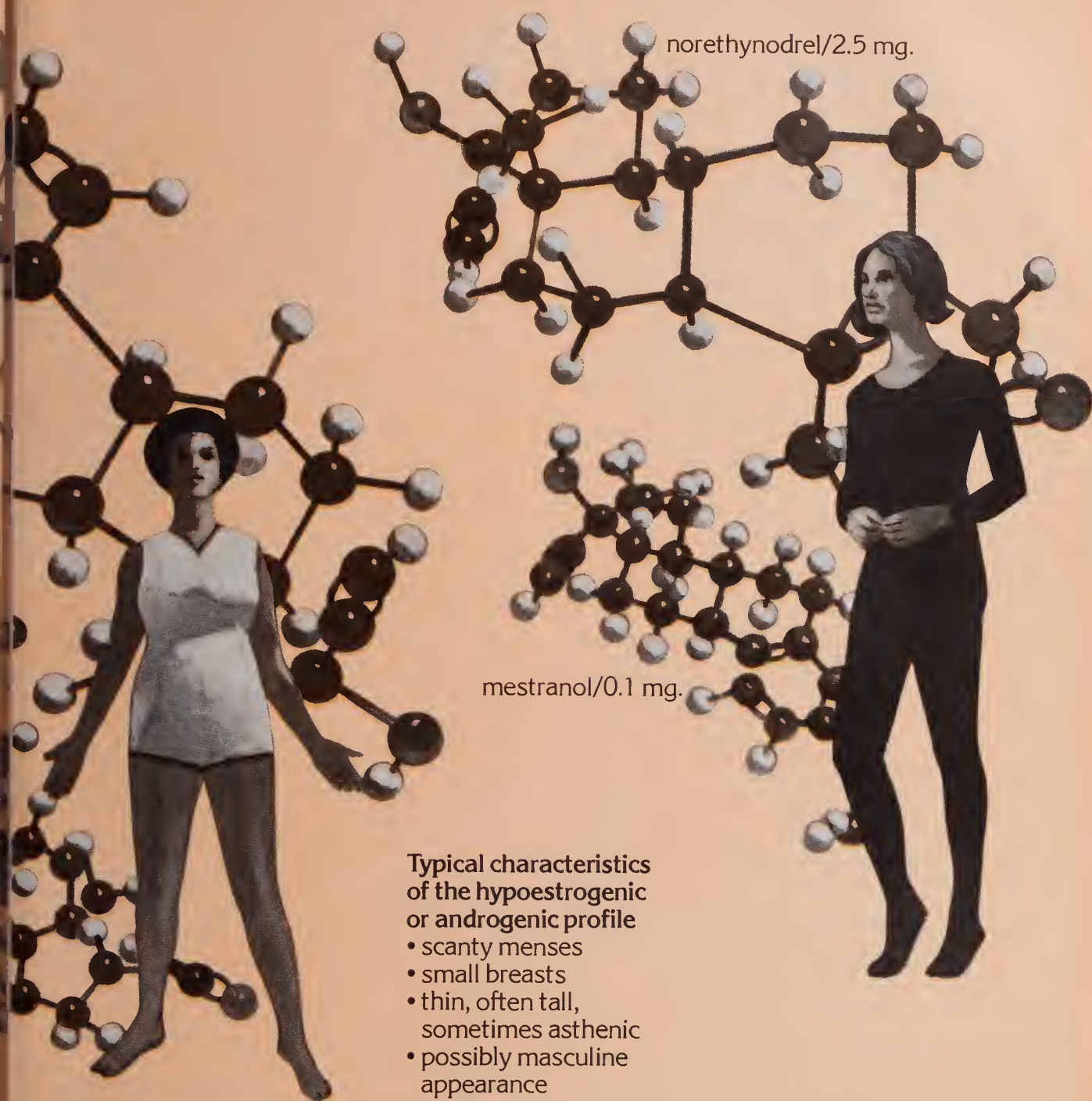
for the majority of women...  
when centrally balanced  
activity is preferred

## Typical characteristics of the slightly hyper-estrogenic profile

- heavy flow
- large breasts, sometimes fibrotic; nipples well pigmented
- very feminine appearance; occasionally short
- premenstrual syndrome, fluid retention
- tendency to uterine fibroids
- high pyknotic index

This formulation, which has less estrogenic activity and a moderate progestogen dominance, may be a good beginning.





norethynodrel/2.5 mg.

mestranol/0.1 mg.

**Typical characteristics  
of the hypoestrogenic  
or androgenic profile**

- scanty menses
- small breasts
- thin, often tall,  
sometimes asthenic
- possibly masculine  
appearance
- acne, hirsutism
- low sexual motivation
- thin vaginal lining,  
tendency to vaginitis  
and dyspareunia

This pill has a relatively  
weak and unique\* progestogen  
with inherent estrogenicity.  
Clinically, just as in animal  
studies, it appears not to  
possess antiestrogenic and  
androgenic activity.

# Demulen<sup>®</sup>

Available in 21- and 28-pill schedules  
Each white tablet contains: ethynodiol  
acetate 1 mg./ethinyl estradiol 50 mcg.  
Each pink tablet in Demulen-28<sup>®</sup> is a  
placebo containing no active ingredients.

Well suited to most women  
when low estrogenic activity  
and moderate progestogen  
dominance are preferred

# Enovid-E<sup>®</sup>

Available in 20- and 21-pill schedules  
Each tablet contains: norethynodrel  
2.5 mg./mestranol 0.1 mg.

a clear choice for women  
when estrogen dominance  
and no androgenic activity  
are preferred

\*Of all the progestogens, norethynodrel  
most resembles the molecular structure of  
the estrogens. It has the weakest proges-  
tational activity of any progestogen in a  
combination pill.



# Ovulen®

Each white tablet contains:  
ethynodiol diacetate 1 mg./mestranol 0.1 mg.

Each pink tablet in Ovulen-28® and Demulen-28® is a placebo, containing no active ingredients.

**Actions**—Ovulen and Demulen act to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen and Demulen depress the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

**Special note**—Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

**Indication**—Ovulen and Demulen are indicated for oral contraception.

**Contraindications**—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

**Warnings**—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain<sup>1-3</sup> leading to this conclusion, and one<sup>4</sup> in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll<sup>3</sup> was about sevenfold, while Sartwell and associates<sup>4</sup> in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

**Precautions**—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations pre-existing uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible

# Demulen®

Each white tablet contains:  
ethynodiol diacetate 1 mg./ethinyl estradiol 50 mcg.

influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen or Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen or Demulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen or Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

**Adverse reactions observed in patients receiving oral contraceptives**—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T<sub>3</sub> uptake values; metyrapone test and pregnanediol determination.

**References:** 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. 13:267-279 (May) 1967. 2. Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193-199 (April 27) 1968. 3. Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. 2:651-657 (June 14) 1969. 4. Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidemiol. 90:365-380 (Nov.) 1969.

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# Enovid-E®

norethynodrel 2.5 mg./mestranol 0.1 mg.

with estrogen-  
dominant/  
nonandrogenic  
activity

**Actions**—Enovid-E acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Enovid-E depresses the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

**Indication**—Enovid-E is indicated for oral contraception.

The *Special Note*, *Contraindications*, *Warnings*, *Precautions* and *Adverse Reactions* listed above for Ovulen and Demulen are applicable to Enovid-E and should be observed when prescribing Enovid-E.

## Enovid-E®

brand of norethynodrel with mestranol

SEARLE

Product of Searle Laboratories  
Division of G. D. Searle & Co.  
Box 5110, Chicago, Illinois 60680  
Where "The Pill" Began





Lee C. Hess, M.D., Florence, KMA President (left) and William E. Rummage, Owensboro, President of the Kentucky Bar Association, (right) are shown signing the Interprofessional Code between the two organizations on April 18, 1973. The Code is reprinted for your information on pages 387-391.

## Scholarship Fund Increases Loan Amount, Awards 26

The Rural Kentucky Medical Scholarship Fund, at the 27th Annual Meeting held May 17, increased from \$2,500 to \$3,000 annual regular loans and from \$3,000 to \$3,500 the "critical county" loans. The loan agreements are to medical students who are residents of Kentucky who agree to practice in an approved rural area of the State one year for each loan received. Forgiveness features are applicable to recipients who establish practice in designated areas of critical or semi-critical need.

There are now 194 physicians in practice in 86 Kentucky counties who have received financial assistance from the Fund, according to G. L. Simpson, M.D., Greenville, Chairman of the Board of Trustees of the Fund.

The Board of Trustees approved 26 loans amounting to \$82,000 to medical students for the coming school year. Seven loans were granted to first-loan applicants. Four of the new applicants will attend the University of Louisville, and three will attend the University of Kentucky.

Doctor Simpson, in noting the success of the program over the past 27 years, expressed particular appreciation for the interest and support of Governor Wendell H. Ford, Health Commissioner William P. McElwain, M.D., and the members of the Kentucky General Assembly.

## BC-BS Announces Changes Among Physician Staff

Changes among the physician staff of the prepaid health care organizations of Blue Cross and Blue Shield of Kentucky have recently been made, according to John C. Watkins, Vice President.

J. Duffy Hancock, M.D., Louisville, one of the

original founding fathers of Kentucky Blue Shield, will retire as Medical Director on August 1. Having been with Blue Cross and Blue Shield of Kentucky since October 1, 1969, Doctor Hancock served as President of the Blue Shield Board in 1957-58. A Past President of KMA, Doctor Hancock will continue to serve the Plans as a member of the newly created Committee of Medical Specialists.

Henry B. Asman, M.D., Louisville, will assume the position of Director of Medical Services. Also a past KMA President, Doctor Asman has served on the Board of Directors of Blue Shield from 1969-1971. Doctor Asman is currently serving as Medical Consultant to the Medicare Division.

Frank B. Radmacher, Jr., M.D., Louisville, will become Medical Consultant. An internist, Doctor Radmacher has been Vice President and Secretary of the Jefferson County Medical Society.

## Support AMA-ERF

The AMA-ERF — the American Medical Association Education and Research Foundation — allows physicians to make donations to medical schools of their choice and to have that money contributed *in toto* to those particular schools. Physicians are thanked personally by the medical school deans for their contributions and at the University of Louisville and the University of Kentucky, the physician is eligible for the Century Club or the "100" Club, if they have given the necessary \$100 during the calendar year. Donations may be made through the County Woman's Auxiliary AMA-ERF Chairman, directly to the American Medical Association or through the State AMA-ERF Chairman, Mrs. Richard B. McElvein, 3517 Greentree Road, Lexington, Kentucky 40502.

Also, AMA-ERF offers physicians a unique method of honoring friends or expressing sympathy to the relatives of those who have died. After a contribution is made, a tasteful card will be sent to any specified person, notifying them of a gift made in their name.

Please support AMA-ERF—it is one way physicians can tangibly show that they do care about the quality and quantity of medical education in America.

**INNOVATIVE COMPREHENSIVE HEALTH PROGRAM** in rural setting needs following professional staff for Family Health Care Program: physicians, nurses, and dentists (Kentucky licensed). Federally funded, decentralized. Preventive oriented. Write or phone *Mountain Comprehensive Health Corporation, Begley Building, Hazard, Kentucky 41701. Telephone: (606) 439-1314.*

MCHC is an Equal Opportunity Employer

## KMA Provides Placement Service To Physicians, Communities

Perhaps you have just completed your internship, residency, military obligation or have some other reason for needing to make a change. Perhaps you are a physician in practice and need an associate or replacement. If so, the KMA Physicians Placement Service is available to help you.

The Physicians Placement Service is designed to help physicians find a desirable area in which to establish a practice or to relocate and to help established physicians find associates.

A semiannual listing of "Opportunities for Practice in Kentucky" is published by the Placement Service. This report lists over 100 areas in Kentucky that need family practitioners either in association with another physician or as a replacement. The Service maintains a similar listing of areas in need of medical specialists. Opportunities for partnership or group practice are also listed and requests are accepted from both physicians and communities for satisfactory placement.

As an additional service the KMA Physicians Placement Service also publishes, "Physicians Seeking Locations," a quarterly listing. This is compiled from data received from the American Medical Association requests from recipients of the Rural Kentucky Medical Scholarship Fund, interns and residents in Kentucky, and personal inquiries to the KMA office.

It is the policy of the Placement Service to provide a two-way flow of information between interested parties, rather than try to "place" physicians in the "right" practice situation.

The Service sends a questionnaire to the applicant physician to obtain information on his educational background, his interests, and preference of type of practice. Upon return of the questionnaire, the physician is sent a list of openings in his area of interest. Each opening is detailed on its facilities for home life, office space, proximity to hospital facilities, and other specifics.

Each physician contacting this office for assistance in finding a suitable location for practice is requested to complete a questionnaire in order that his name may be carried on the next listing of "Physicians Seeking Locations."

All qualified physicians who request assistance from the Placement Service are given help. An applicant need not be a member of the Kentucky Medical Association and there is no charge either to the physician or to the community seeking the services of this program.

Inquiries may be addressed to the Physicians Placement Service, Kentucky Medical Association, 3532 Ephraim McDowell Drive, Louisville, Kentucky 40205.



## EYES RIGHT!

...to SOUTHERN OPTICAL

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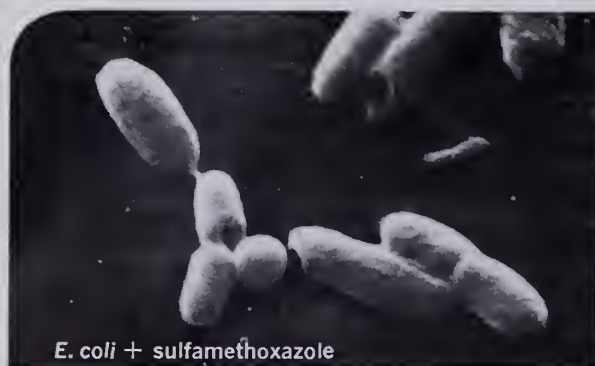
# Encounter under the Scanning Electron Microscope



## SEM reveals changes in *E. coli* exposed to antibacterial agents

The Scanning Electron Microscope (SEM) is the only instrument which gives 3-dimensional views on a microscopic level. This permits the surface morphology of microorganisms to be observed in

detailed perspective. Changes in surface morphology of *E. coli* exposed to various antimicrobial agents are seen on the following page. An SEM photomicrograph of normal control *E. coli* appears above.



*E. coli* + sulfamethoxazole



*E. coli* + tetracycline



*E. coli* + cephalothin



*E. coli* + ampicillin

## Different modes of antibacterial action — Similar changes in morphology

As part of a series of experiments,<sup>1-3</sup> strains of *E. coli* proven susceptible to each antibacterial agent were exposed to 1 MIC of the respective antibacterials for a three-hour period. Included were cell-wall-active drugs, ampicillin and cephalothin; a drug interfering with intracellular protein synthesis, tetracycline; and a chemical agent which acts by interference with para-aminobenzoic acid, sulfamethoxazole.

As seen above, elongation of the bacilli, mid-cell defects and spheroplast-like forms may be appreciated with the SEM technique. These changes in bacterial morphology were similar... regardless of the antibacterial agent used and irrespective of

its mechanism of action.

"At present, the significance of these observations in clinical infection must be considered with caution, but it is hoped that these data will stimulate a reevaluation of present concepts of the nature and role of morphological variants of bacteria exposed to a variety of antibacterial factors."<sup>2</sup>

It should be noted that no clinical conclusions can be drawn from this study, as it is not always possible to extrapolate *in vitro* data to humans.

**References:** 1. Klainer, A. S.; Fass, R. J., and Perkins, R. L.: Scientific Exhibit presented at the 25th American Medical Association Clinical Convention, New Orleans, La., Nov. 28-Dec. 1, 1971. 2. Klainer, A. S., and Perkins, R. L.: *Antimicrob. Agents Chemother.*, 1:164, 1972. 3. Klainer, A. S.: Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note:** Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

**Contraindications:** Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

**Warnings:** Safety during pregnancy has not been estab-

lished. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

**Adverse Reactions:** Blood dyscrasias (agranulocytosis,



# Encounter in Clinical Practice

## Control of primary bacterial offenders

Antibacterial Gantanol® (sulfamethoxazole) controls susceptible strains of *E. coli* and other gram-negative and gram-positive organisms

often implicated in acute nonobstructed pyelonephritis and cystitis.

## Prompt antibacterial blood and urine levels

In from 2 to 3 hours after the initial 2-Gm adult dose, antibacterial levels are present in

both the blood and urine.

## B.I.D./T.I.D. dosage for around-the-clock coverage

Subsequent 1-Gm doses provide up to 12 hours of antibacterial coverage. More severe u.t.i. may require a q. 8 h. dosage regimen. Either schedule provides coverage during the waking

and sleeping hours—especially important during hours of sleep when normal urinary retention tends to favor bacterial proliferation.

## Also effective in nonobstructed chronic and recurrent u.t.i.

It is not uncommon for the elderly and the debilitated to develop chronic and/or recurrent nonobstructed urinary tract infections such as pyelonephritis and cystitis. Such cases often re-

spond satisfactorily to Gantanol. The increasing frequency of resistant organisms is a limitation of usefulness of antibacterial agents including sulfonamides, especially in chronic or recurrent u.t.i.

## Your Option: Tablets or Suspension

Either dosage form—the Tablets or the pleasant-tasting, cherry-flavored Suspension—can provide the dependable antibacterial activity necessary to control susceptible nonobstructed cystitis and pyelonephritis. Symptomatic improvement may usually be expected in 24 to 48 hours. The usual precautions with sulfonamide

therapy should be observed, including adequate fluid intake. Gantanol (sulfamethoxazole) is generally well tolerated with relative freedom from complications; the most common side effects are nausea, vomiting and diarrhea. Frequent c.b.c.'s and urinalyses with microscopic examination are recommended.

**In nonobstructed cystitis and pyelonephritis due to susceptible organisms**

**Gantanol®**  
(sulfamethoxazole)  
**Basic Therapy**

aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thy-

roid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

**Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age** (except adjunctively with pyrimethamine in congenital toxoplasmosis).

*Usual adult dosage:* 2 Gm (4 tabs or teaspoon) initially, then 1 Gm b.i.d. or t.i.d. depending on severity of infection.

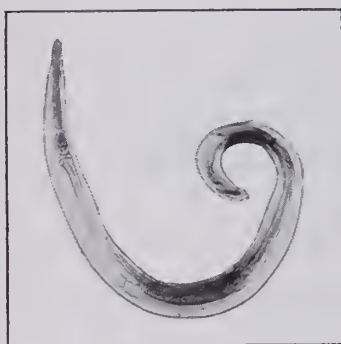
*Usual child's dosage:* 0.5 Gm (1 tab or teaspoon)/20 lbs of body weight initially, then 0.25 Gm/20 lbs b.i.d. Maximum dose should not exceed 75 mg/kg/24 hrs.

**Supplied:** Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110

# Pinworm therapy is often a family affair



**Contraindications:** History of hypersensitivity to thiabendazole.

**Warnings:** If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.

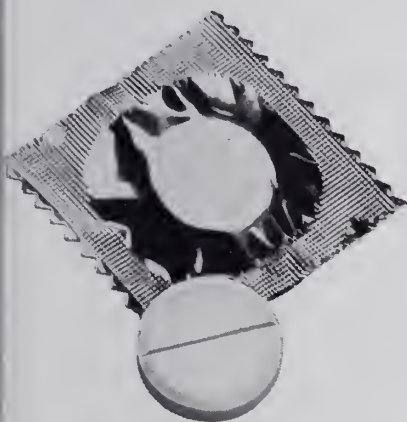
**Precautions:** Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction,

patients should be carefully monitored.

**Adverse Reactions:** Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of live *Ascaris* in the mouth and nose. Hypersensitivity reactions



# Chewable Tablets 500 mg Mintezol® (THIABENDAZOLE | MSD)



so easy to take  
everyone in the family  
can keep to the  
regimen you prescribe

include: fever, facial flush, chills, conjunctival injection, angioedema, anaphylaxis, skin rashes, erythema multiforme (including Stevens-Johnson syndrome), and lymphadenopathy.  
**Supplied:** Chewable tablets, containing 500 mg thiabendazole, in boxes of 36, strip packaged, individually foil wrapped; Suspension, containing 500 mg thiabendazole per 5 ml, in bottles of 120 ml.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

## INDICATION | DOSAGE SCHEDULE

MINTEZOL® (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infections. Dosages are weight related. For your convenience, the information in the weight-dose chart below is included in the full prescribing information and in the 1973 edition of PDR.

*The recommended maximum daily dose of MINTEZOL is 3 g (6 tablets).*

MINTEZOL should be given after meals if possible. Dietary restriction, complementary medications, and cleansing enemas are not needed.

The usual dosage schedule for all conditions is two doses per day. The size of the dose is determined by the patient's weight.

Weight-dose chart:

WEIGHT (lb)	EACH DOSE (g)	TABLETS
25	0.25	½
50	0.5	1
75	0.75	1½
100	1.0	2
125	1.25	2½
150 & over	1.5	3

The regimen for each indication follows:

INDICATION	REGIMEN	COMMENTS
Pinworm disease	Two doses per day for 1 day. Repeat in 7 days.  This regimen is designed to reduce the risk of reinfection.	If this is not practical, give 2 doses per day for 2 successive days.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses per day for 2 successive days.	A single dose of 20 mg/lb or 50 mg/kg may be employed as an alternative schedule, but a higher incidence of side effects should be expected.
Creeping eruption	Two doses per day for 2 successive days.	If active lesions are still present 2 days after completion of therapy, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses per day for 2 to 4 successive days according to the response of the patient.	The optimal dosage for the treatment of trichinosis has not been established.

\*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.

**What's  
on your  
patient's  
face...**

**may be more important than  
his chief complaint**



**The lesions on his face may be solar/actinic — so-called “senile” keratoses...and they may be premalignant.**

## Solar, actinic or senile keratoses

These lesions may be called by several names, but they usually can be identified by the following characteristics: the typical lesion is flat or slightly elevated, of a brownish or reddish color, papular, dry, rough, adherent, and sharply defined. They commonly occur as multiple lesions, chiefly on the exposed portions of the skin.



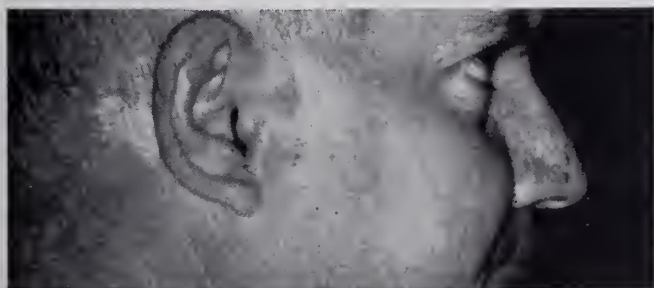
*Patient P.T.\* seen on 3/29/67 shows typical lesions of moderately severe keratoses. Note residual scarring on ridge of nose from previous cryosurgical and electro-surgical procedures.*

## Sequence of therapy/ selectivity of response

After several days of therapy with Efudex® (fluorouracil), erythema may begin to appear in the area of the lesions; the reaction usually reaches its height of unsightliness and discomfort within two weeks, declining after discontinuation of therapy. This reaction occurs in affected areas. Since the response is so predictable, lesions that do not respond should be biopsied.

## Acceptable results

Treatment with Efudex provides highly favorable cosmetic results. Incidence of scarring is low. This is particularly important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.



*Patient P.T.\* seen on 6/12/67, seven weeks after discontinuation of 5%-FU cream. Reaction has subsided. Residual scarring not seen except for that due to prior surgery. Inflammation has cleared and face is clear of keratotic lesions.*

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Multiple actinic or solar keratoses.  
**Contraindications:** Patients with known hypersensitivity to any of its components.

**Warnings:** If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

**Precautions:** If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

**Adverse Reactions:** Local — pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported — insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

**Dosage and Administration:** Apply sufficient quantity to cover lesion twice daily with non-metal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

**How Supplied:** Solution, 10-ml drop dispensers — containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes — containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

**This patient's lesions  
were resolved with**

**Efudex<sup>®</sup>**  
**(fluorouracil)**  
**5% cream/solution**  
**...a Roche exclusive**



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Division of Hoffmann-La Roche Inc.  
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# Now form follows function

Only **Candeptin** (candicidin)  
gives you this unique form...  
a soft gelatin capsule—  
highly effective therapy for all  
your vaginal moniliasis patients



**CANDEPTIN® (candicidin) VAGELETTES™**  
**Vaginal Capsules**...a unique dosage form...  
anatomically and therapeutically designed to extend  
flexibility in the treatment of vaginal moniliasis.

#### **Virtually unlimited application**

CANDEPTIN VAGELETTES Vaginal Capsules provide  
the specific high potency antimicrobial agent,  
candicidin, in a soft gelatin capsule—the shape  
designed with your patient in mind. It permits easy  
manual insertion without the need for an applicator  
or inserter...of particular value for the pregnant  
patient...for *intravaginal use*. By cutting off the tip  
of the narrow soft end, the contents can be extruded  
through an intact hymen for *intravaginal use*. And  
it is readily adaptable to *topical application* for  
labial involvement, and/or *intravaginal use* to treat  
mucosal infection.

#### **CANDEPTIN (candicidin) provides:**

##### **Rapid results**

Prompt, symptomatic relief—itching, burning,  
and discharge subside in 48-72 hours!  
Soothing, miscible ointment permits complete  
contact with affected tissue.  
Usually cures in a single 14-day course of therapy<sup>2,3,4</sup>

##### **Safe**

Exact dosage assured<sup>2,3</sup>

No side effects, clinical reports of irritation or  
sensitization extremely rare.

##### **Convenience**

Easy to use intravaginally and/or topically  
for labial involvement.

Encourages patient acceptance and cooperation.  
Therapy is easy to start in your office.

##### **Clinical proof of potency**

CANDEPTIN (candicidin) is significantly more potent  
*in vitro* than nystatin<sup>5</sup> CANDEPTIN Vaginal Ointment  
and Tablets have a clinical record of cure rates  
of 90% and more in pregnant and non-pregnant  
patients!<sup>4,6</sup> In recent studies on CANDEPTIN  
VAGELETTES Vaginal Capsules, involving both gravid  
and non-gravid patients, a 100% culture-confirmed  
cure rate was achieved with a single 14-day  
course of therapy.<sup>2,3</sup>

##### **Unique**

**CANDEPTIN® (candicidin)**  
**VAGELETTES™ Vaginal Capsules**



**Description:** CANDEPTIN (candidin) Vaginal Ointment contains a dispersion of candidin powder equivalent to 0.6 mg. per gm. or 0.06% Candidin activity in U.S.P. petrolatum. 3 mg. of Candidin is contained in 5 gm. of ointment or one applicatorful. CANDEPTIN Vaginal Tablets contain Candidin powder equivalent to 3 mg. (0.3%) Candidin activity dispersed in starch, lactose and magnesium stearate. CANDEPTIN VAGELETES Vaginal Capsules contain 3 mg. of Candidin activity dispersed in 5 gm. U.S.P. petrolatum.

**Action:** CANDEPTIN Vaginal Ointment, Vaginal Tablets, and VAGELETES Vaginal Capsules possess anti-monilial activity.

**Indications:** Vaginitis due to *Candida albicans* and other *Candida* species.

**Contraindications:** Contraindicated for patients known to be sensitive to any of its components. During pregnancy manual Tablet or VAGELETES Capsule insertion may be preferred since the use of the ointment applicator or tablet inserter may be contraindicated.

**Caution:** During treatment it is recommended that the patient refrain from sexual intercourse or the husband wear a condom to avoid re-infection.

**Adverse Reaction:** Clinical reports of sensitization or temporary irritation with CANDEPTIN Vaginal Ointment, Vaginal Tablets or VAGELETES Vaginal Capsules have been extremely rare.


**Dosage:** One vaginal applicatorful of CANDEPTIN Ointment or one Vaginal Tablet or one VAGELETES Vaginal Capsule is inserted high in the vagina twice a day, in the morning and at bedtime, for 14 days. Treatment may be repeated if symptoms persist or reappear.

**Available Dosage Forms:** CANDEPTIN Vaginal Ointment is supplied in 75 gm. tubes with applicator (14-day regimen requires 2 tubes). CANDEPTIN Vaginal Tablets are packaged in boxes of 28, in foil with inserter—enough for a full course of treatment. CANDEPTIN VAGELETES Vaginal Capsules are packaged in boxes of 14 (14-day regimen requires 2 boxes.)

Store under refrigeration to insure full potency.

Federal law prohibits dispensing without prescription.

**References:** 1. Olsen, J.R.: *Journal-Lancet* 85: 287 (July) 1965. 2. Giorlando, S.W.: *Ob/Gyn Dig.* 13:32 (Sept.) 1971. 3. Decker, A.: *Case Reports on File, Medical Department, Julius Schmid.* 4. Giorlando, S.W., Torres, J.F., and Muscillo, G.: *Am. J. Obst. & Gynec.* 90: 370 (Oct. 1) 1964. 5. Lechevalier, H.: *Antibiotics Annual 1959-1960.* New York, Antibiotica Inc., 1960. pp. 614-618. 6. Friedel, H.J.: *Maryland M.J.*, 15:36 (Feb.) 1966.

 **Julius Schmid Pharmaceuticals**  
423 West 55th Street  
New York, New York 10019

**CANDEPTIN®**  
(candidin)

Vaginal Tablets

Vaginal Ointment

and VAGELETES™  
Vaginal Capsules

# General LEASING

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Association

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FOR THE LEASING OF  
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& LABORATORY EQUIPMENT;  
AND OFFICE FURNISHINGS

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has qualified us to serve you well,  
and we appreciate this opportunity  
to extend our facilities.

## General Leasing

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120 Bauer Ave., Louisville-St. Matthews

(502) 896-0383

#### M. D. Recruitment

Physicians wanted for a family health center which is developing on a prepaid group practice pattern (H.M.O.). Board certified or qualified family physicians, internists, pediatricians, and obstetricians. Must be Kentucky licensed. Must be qualified for hospital staff appointment. Salary plus attractive fringe benefits depending upon qualifications and experience.

*Direct inquiries to:*

*ParkHill Family Health Center  
Fincastle Building—Suite 419  
Louisville, Kentucky 40202*

#### Call For Physicians

PSYCHIATRIST, Board Certified or eligible. PHYSICIAN, INTERNAL MEDICINE, Board Certified or eligible with subspecialty in cardiology. GENERAL PRACTITIONER. Salary open. Normal 40-hour week. Liberal fringe benefits. Housing available. License and state required. Midwest City, 40,000 population, with excellent community schools, colleges and universities. Located near I-69, 65 miles north of Indianapolis, 50 miles south of Fort Wayne.

**Equal Opportunity Employer**

*Contact: Chief of Staff, V.A. Hospital,  
Marion, Indiana  
Call collect: (317) 674-3321.*

#### Information Sought

Claude A. Frazier, M.D., Asheville, N.C., is seeking information on the faith and/or religion of prominent physicians for use in a book he is editing. Anyone wishing to contribute information to Doctor Frazier may contact him at 4-C Doctor's Park, Asheville, N.C. 28801.

Richard G. Banta, a fourth year medical student from the University of Kentucky, was selected as a finalist in a scientific exhibit competition held at the annual scientific forum of the Student American Medical Association in Galveston. The contest, sponsored by E. R. Squibb & Sons, Inc., awarded Mr. Banta for an exhibit entitled "New Techniques Facilitating Experimental Fetal Microsurgery."

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## acute arthritic inflammation...heat that freezes

In acute rheumatoid arthritis consider Tandearil. The anti-inflammatory action of Tandearil quickly helps reduce heat, pain, swelling, and stiffness. Results are usually seen in 3 or 4 days. Try it for a week when the symptoms defy aspirin control.

Remember that Tandearil is not a simple analgesic. It should not be used on patients responding to routine therapy. Before using, please read the prescribing information. It's summarized below.

## Tandearil® helps take the heat off oxyphenbutazone NF Geigy

Tablets of 100 mg.

**Important Note:** This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions (symptoms of blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

**Indications:** Acute gouty arthritis, rheumatoid arthritis, rheumatoid spondylitis.

**Contraindications:** Children 14 years or less; senile patients; history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia; history or presence of drug allergy; blood dyscrasias; renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema; stomatitis and salivary gland enlargement due to the drug; polymyalgia rheumatica and temporal arteritis; patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

**Warnings:** Age, weight, dosage, duration of therapy, existence of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against po-

tential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonyleurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

**Precautions:** The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

**Adverse Reactions:** This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia,

gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement.

(B)98-146-800-F (10/71)

For complete details, including dosage, please see full prescribing information.

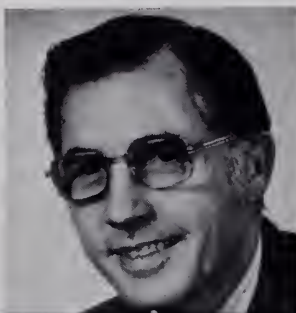
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# Opinion & Dialogue

## "Prescription drugs – who should determine the maker?"

### Dispenser of Medicine

Clifton J. Latiolais  
President  
American  
Pharmaceutical  
Association



### Maker of Medicine

C. Joseph Stetler  
President  
Pharmaceutical  
Manufacturers  
Association



"Too many doctors are indifferent to the economic consequences of their decisions." So stated a recent issue of *Medical News Report* (December 4, 1972), an independent weekly newsletter published by former AMA Chief Executive F. J. L. Blasingame, M.D.

#### Doctor, are you indifferent...?

In discussing an anticipated increase in Blue Shield rates, Dr. Blasingame's newsletter had this to say:

"In general, it can be said, MD's have given the impression they are not particularly concerned with the increase in cost of health care to the patients..."

"True, an MD's training is primarily scientific, but in the real world of practice, all of his scientific decisions have a price tag, or an economic impact. The economics of health care beckon the practitioner's attention. Concern for economics of medicine

When the pharmacist recommends that a drug product other than the one ordered be dispensed, the prescriber invariably permits the change when he feels the best interests of the patient will be served.

#### Shortcomings of Pro-Substitution Argument

The fact remains that it is necessary for the prescriber to know that the change is being contemplated, and to be in a position to consent or demur. Without that opportunity, the unilateral decision of the pharmacist made in the absence of clinical knowledge of the patient, could expose him to needless risks, and in addition, jeopardize the relationship between the professions of Pharmacy and Medicine. In my view, there is nothing in the pro-substitution argument that offsets these risks.

#### The Issue of Drug Knowledge

Substitution advocates claim that the primary justification for changing the rules is the desire to better utilize pharmacists' knowledge about drugs. Yet the pharmacist's task to keep current on the entire field of drug therapy, to some degree puts him at a disadvantage. Most often, a practicing physician will need expert knowledge of no more than 2



ould be an obligation of medical practice...

"Medical societies ought to conduct continuing campaigns to point out the substantial savings that could be realized thru deductible insurance and protection for catastrophic illness. At the very least, they should, in the patients' interest, question the tactics of any insurance organization that raises health care costs by forcing policyholders to buy insurance they may not need or want and probably won't ever use.

"Too many doctors are indifferent to the economic consequences of their decisions. Too many, for example, habitually hospitalize patients for the convenience of the MD. It's nonsense to deny such habits exist...

"Doctors, thru their medical societies, have unhesitatingly appealed to their patients for support in the fight against government interference with the private practice of medicine. And the public in the past has responded. It's time the American Medical Association and state and local medical societies paid off the debt by decisive action to hold down the cost of medical care."

#### Cost of Drugs

Insurance rates and hospital charges are only two factors in health

care costs. The cost of drugs—both prescription and nonprescription—is another.

And when it comes to drug costs, the nation's pharmacists are concerned. Through their national professional society, the American Pharmaceutical Association, pharmacists are advising the public to use nonprescription medication cautiously and conservatively, and to seek the advice of their pharmacist before selecting or purchasing such drugs.

#### Outdated Laws

The pharmacist also is aware that when it comes to prescription drugs, often he has an even greater opportunity to reduce the cost to the patient—with no sacrifice in the quality of the medication dispensed. But in many states, outdated and antiquated laws prevent the pharmacist from engaging in drug product selection. "Drug product selection" simply means that the pharmacist functions in the patient's interest by consciously choosing, from the multiple brands available, a low-cost quality brand of the specific drug to be dispensed in response to the physician's prescription order.

Much *misinformation* has been purposely spread by those who stand to gain financially by maintaining

high drug costs to the public. An endless stream of propaganda has emanated from the drug industry in an effort to persuade the medical profession that these so-called anti-substitution laws should be retained. And as long as these laws are retained, the drug industry will continue its current marketing practices which contribute unnecessarily to high drug costs to patients. These practices also are inviting government agencies to expand their restrictive controls on physicians and pharmacists.

#### APhA Efforts

As pharmacists, we are concerned about health care costs. We hope that every physician shares our concern on this vital issue, and will give his personal support to the constructive efforts APhA has undertaken in the interest of all patients.

*(For a complete discussion of drug product selection, you are invited to request a free copy of the "White Paper on the Pharmacist's Role in Product Selection" from: American Pharmaceutical Association, 2215 Constitution Avenue, N.W., Washington, D.C. 20037.)*

or 30 drugs that he selects to treat the majority of conditions encountered in his practice. Moreover, the physician's choice of a specific brand is based on his knowledge of the patient's medical history and current condition, and his experiences with the particular manufacturer's product.

Some substitution proponents have argued that the dispensing of a prescription is a simple two-party transaction between the pharmacist and the patient, and that a substituting pharmacist may avoid even a technical breach of contract by simply notifying the patient that he is making the substitution. I would judge that few courts would be sympathetic toward a pharmacist who substituted without physician approval and who undertook a legal defense that seeks to make the patient responsible for the pharmacist's actions.

#### Reduced Prescription Prices?

Substitution advocates are suggesting to the consumer, and particularly the consumer activist, that reduced prescription prices could follow legalization of substitution. We have seen absolutely no evidence to justify this claim. To the contrary, experience in Alberta, Canada, where substitution is authorized, suggests

the opposite.

Many pharmacists understandably are concerned about the cost of maintaining multiple stocks of similar products. While there is no doubt that inventory costs rise when additional brands are stocked, it would be interesting to know how much they rise, and how many pharmacists actually stock *all* brands—of, say, ampicillin or tetracycline—or how long they keep "slow moving" products on their shelves before they are returned for credit. To ask that the industry eliminate multiple sources is to ask competitors to stop competing.

#### Drug Substitution—A License for the Unethical

Anti-substitution repeal would favor "corner cutting" pharmacists and manufacturers. For them, free substitution would be not a right, but a license. As an aftermath, it is quite likely that the confidence of both physicians and patients in the profession of Pharmacy would be eroded, as revelations about the unconscionable behavior of an undisciplined few were magnified in the press or in professional circles.

#### Summary

In short, what the American Pharmaceutical Association advo-

cates as a broad-spectrum panacea looks to us to be not only a minority view (advocacy of substitution is by no means a uniform policy in Pharmacy), but also an extraordinarily costly and ineffective remedy, whose side effects are odious. We believe (1) that an impressive majority of pharmacists prefer to work with Medicine and with industry, for the consumer, and for the general good, (2) that they seek the privilege to substitute when the patient might gain and when the patient's doctor agrees, and (3) that they seek to work for the resolution of genuine grievances openly and professionally.

*(For amplification of PMA views, please write for our booklet, "The Medications Physicians Prescribe: Who Shall Determine the Source?" It is available from: Pharmaceutical Manufacturers Association, 1155 Fifteenth Street, N.W., Washington, D.C. 20005.)*

Pharmaceutical  
Manufacturers Association  
1155 Fifteenth Street, N.W.  
Washington, D.C. 20005





## Placidyl® (ETHCHLORVYNOL)

### Brief Summary

**Indications**—Placidyl (ethchlorvynol) is indicated as short-term hypnotic therapy in the management of insomnia.

**Contraindications**—Drug hypersensitivity and porphyria.

**Warnings**—Not recommended during the first and second trimester of pregnancy. Caution patients of possible combined exaggerated effects with alcohol, barbiturates, tranquilizers or other CNS depressants. Exaggerated effects might result in blurring of vision, paralysis of accommodation and profound hypnosis. Caution patients concerning driving a motor vehicle, operating machinery, or other hazardous operations requiring alertness after taking the drug. ADMINISTER WITH CAUTION TO PATIENTS WITH SUICIDAL TENDENCIES AND DO NOT PRESCRIBE LARGE QUANTITIES OF THE DRUG. Adjustment of the dosage of oral anticoagulants might be necessary when beginning ethchlorvynol therapy, during therapy, or after stopping therapy. This drug is not recommended for use in children. PLACIDYL HAS THE POTENTIAL FOR THE DEVELOPMENT OF PSYCHOLOGICAL AND PHYSICAL DEPENDENCE. INSTANCES OF SEVERE WITHDRAWAL SYMPTOMS, INCLUDING CONVULSIONS AND DELIRIUM CLINICALLY SIMILAR TO THOSE SEEN WITH BARBITURATES, HAVE BEEN REPORTED IN PATIENTS TAKING REGULAR DOSES AS LOW AS 1000 MG. PER DAY OVER A PERIOD OF TIME WHEN THE DRUG WAS SUDDENLY DISCONTINUED. PROLONGED ADMINISTRATION OF THE DRUG IS NOT RECOMMENDED. Addiction-prone patients or those who are likely to increase dosages of the drug on their own initiative should be observed for evidence of signs or symptoms which may indicate possible early withdrawal or abstinence symptoms. Signs and symptoms associated with withdrawal and abstinence include unusual anxiety, tremor, ataxia, slurring of speech, memory loss, perceptual distortions, irritability, agitation and delirium. Other less well defined signs and symptoms, not necessarily due to withdrawal and abstinence, may include anorexia, nausea or vomiting, weakness, dizziness, sweating, muscle twitching and weight loss. Abrupt discontinuance of Placidyl following prolonged overdosage may result in convulsions and delirium.

**Precautions**—Toxic amblyopia has been reported with long-term continuous use of ethchlorvynol. Permanent visual defects have been observed, although amblyopia has improved after discontinuation of the drug. Drug dosage should be limited for elderly and debilitated patients to the smallest effective amount. If pain is present, this drug should only be given if insomnia persists after pain is controlled with analgesics. Caution is advised in prescribing the drug for patients who are being treated with either MAO inhibitors or antidepressants. Transient delirium has been reported with the combination of Placidyl and amitriptyline. Drug dosage should be reduced if prescribed for patients receiving MAO inhibitors or antidepressants. Caution should be exercised in patients with impaired hepatic or renal function. Patients who respond unpredictably to barbiturates or alcohol, or who exhibit excitement and release of inhibition in association with such agents, may also react in this way to Placidyl. Rarely, patients may exhibit symptoms suggestive of an unusual susceptibility to the drug; such as prolonged hypnosis, profound muscular weakness, excitement, hysteria, or syncope without marked hypotension. Transient giddiness or ataxia may occur.

**Adverse Reactions**—Hypotension, nausea or vomiting, gastric upset, aftertaste, blurring of vision, dizziness, facial numbness, and allergic reaction typified by urticaria have been reported following Placidyl administration. Mild "hangover" and symptoms of mild excitation have occurred in some patients. There have been rare reports of cholestatic jaundice occurring in patients taking ethchlorvynol. A few cases of thrombocytopenia have been reported in patients receiving ethchlorvynol. 306433

## Give us his nights.

Prescribe Placidyl. Chances are, we'll give him a good night's sleep.

Insomnia often accompanies a cardiovascular episode. How many nights does he lie awake, awaiting exactly what he fears most . . . another stroke, another heart attack? He doesn't need fear. He needs sleep.

When sleep is synonymous with therapy, remember . . . Placidyl is synonymous with sleep. It has been for over 17 years.

If time is the criterion to inspire your confidence . . . you can rest assured with Placidyl.

Prescribed by physicians for over 17 years.

## Placidyl®



(ETHCHLORVYNOL CAPSULES, 500 or 750 mg.)





# IN ASTHMA IN EMPHYSEMA



*optional  
therapy*



# THE mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications** are listed above. **MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. **Adult, one tablespoonful, 4 times daily.** All doses should be followed with  $\frac{1}{2}$  to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

## **MUDRANE—original formula**

*First choice*

## **MUDRANE-2**

*When ephedrine is too exciting  
or is contraindicated*

## **MUDRANE GG**

*During pregnancy or when K.I. is  
contraindicated or not tolerated*

## **MUDRANE GG-2**

*A counterpart for Mudrane-2*

## **MUDRANE GG ELIXIR**

*For pediatric use  
or where liquids are preferred*

*Clinical specimens  
available to physicians.*

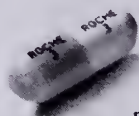
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# How strong must a tranquilizer be for severe anxiety?

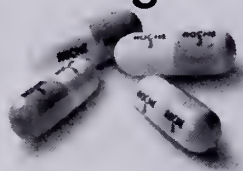
## As strong as Librium® 25 mg (chlordiazepoxide HCl)



The achievement of desired therapeutic results is often a function of the dosage strength as well as the drug's intrinsic action. Thus, when anxiety is *severe*, the 25-mg strength of Librium frequently provides the necessary antianxiety action with a minimum of unwanted adverse reactions. Librium 25 mg is a convenient dosage form for the relief of severe, incapacitating anxiety, specifically formulated to supplement your counsel and reassurance.

### Benefits-to-risks ratio permits higher dosage

For over 13 years, Librium has been recognized for its excellent benefits-to-risks ratio, an asset in the *higher* dosage ranges as in more common clinical applications. Thus, the frequency of dosage with Librium 25 mg can be flexibly adjusted to the needs and response of the individual patient, up to 100 mg daily if required. Total daily dosage for the elderly and debilitated should not exceed 20 mg. When severe anxiety has been reduced, Librium dosage should be correspondingly reduced or discontinued entirely.



basic support  
in severe anxiety  
**Librium® 25 mg**  
(chlordiazepoxide HCl)  
1 capsule t.i.d./q.i.d.



Roche Laboratories  
Division of Hoffmann-La Roche Inc  
Nutley, N.J. 07110

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Relief of anxiety and tension occurring alone or accompanying various disease states.

**Contraindications:** Patients with known hypersensitivity to the drug.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

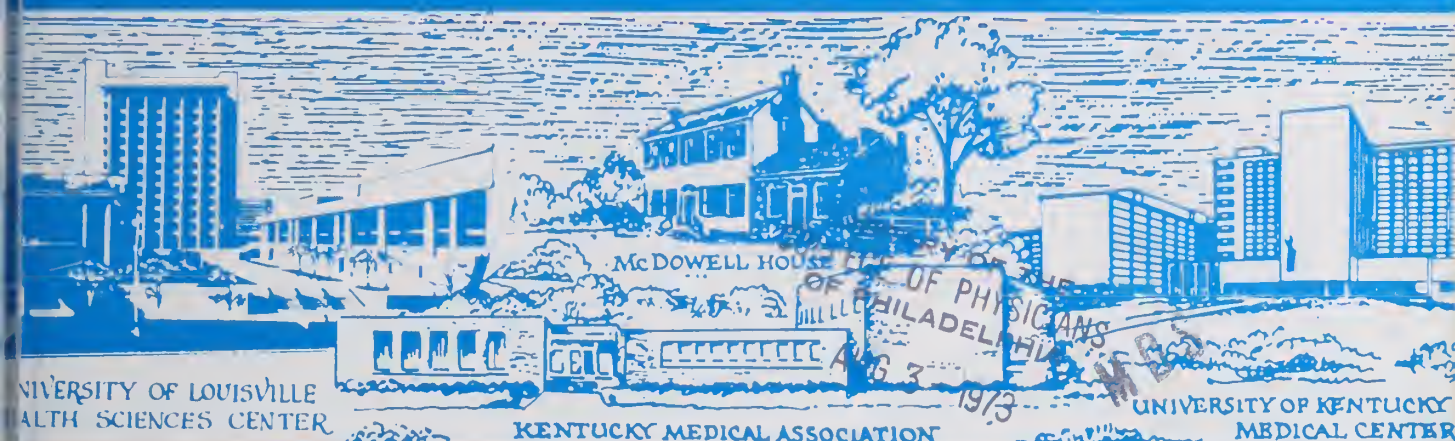
**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

**Adverse Reactions:** Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

**Supplied:** Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.



*The Journal of The*  
**KENTUCKY**  
*Medical Association*



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**KMA 1973 Annual Meeting**

**September 18-20**

**Bluegrass Convention Center**

**Ramada Inn**

**Louisville, Kentucky**



Everybody experiences psychic tension.



Most people can handle this tension.



Some people develop excessive psychic tension and need your counseling,



and a few may need counseling  
*and* the psychotropic action of Valium® (diazepam).



Before deciding to make Valium (diazepam) part of your treatment plan, check on whether or not the patient is presently taking drugs and, if so, what his response has been. Along with the medical and social history, this information can help you determine initial dosage, the possibility of side effects and the ultimate prospects of success or failure.

While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.



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Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anti-convulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.


**Dosage:** Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

**Supplied:** Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose® packages of 1000.

# Valium® (diazepam)

To help you manage excessive psychic tension

# The Rx that says "Relax"



**BUTISOL Sodium provides highly predictable sedative effect:** minor dosage adjustments are usually all that's needed to produce the desired degree of sedation. (With 3 dosage forms and 4 strengths to make adjustments easy.)

**BUTISOL Sodium offers prompt, smooth, relatively non-cumulative action:** begins to work within 30 minutes... yet, because of its intermediate rate of metabolism, generally has neither a "roller-coaster" nor a "hangover" effect.

**BUTISOL Sodium is remarkably well tolerated:** a 30-year safety record assures you that there is little likelihood of unexpected reactions.

**BUTISOL Sodium saves your patients money:** costs less than half as much as most commonly prescribed sedative tranquilizers.\*

These are four good reasons for prescribing BUTISOL Sodium for the many patients who need to have the pace set just a little slower. Its gentle daytime sedative action is often all that's needed to help the usually well-adjusted patient cope with temporary stress.

\*Based on surveys of average daily prescription costs.

**Butisol** SODIUM<sup>®</sup>  
(SODIUM BUTABARBITAL)

**Contraindications:** Porphyria, sensitivity to barbiturates, or susceptibility to dependence on sedative-hypnotics. **Warning:** May be habit forming.

**Precautions:** Exercise caution in: moderate to severe hepatic disease; withdrawal in drug dependence or the taking of excessive doses over a long period, to avoid withdrawal symptoms; elderly or debilitated patients, to avoid possible marked excitement or depression; use with alcohol or other CNS depressants, because of combined effects. **Adverse Reactions:** Drowsiness at daytime sedative dose levels, skin rashes, "hangover" and gastrointestinal disturbances are seldom seen. **Usual Adult Dosage:** For daytime sedation, 15 mg. to 30 mg. t.i.d. or q.i.d. For hypnosis, 50 mg. to 100 mg. **Available as:** Tablets, 15 mg., 30 mg., 50 mg., 100 mg.; Elixir, 30 mg. per 5 cc. (alcohol 7%). BUTICAPS<sup>®</sup> [Capsules BUTISOL SODIUM (sodium butabarbital)] 15 mg., 30 mg., 50 mg., 100 mg.

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# KENTUCKY MEDICAL ASSOCIATION

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# MESSAGE FROM THE PRESIDENT

## A Year of Serious Deliberations

**T**HE years roll by very rapidly and as I was preparing to attend the AMA meeting in New York last month the thought occurred that the 1973 KMA Annual Meeting, which is just "around the corner," will be filled with serious deliberations on subjects that could have a lasting effect on the practice of medicine in Kentucky.

A quick check of *The Journal* of November, 1972, reflected the rather alarming statistic that **37 counties** were without representation at either session of the House of Delegates in 1972. There were a number of other counties that were only represented at one session. I want to urge all of you, when you begin to choose your delegates for 1973, to be certain that they are aware of the many hours of hard work that will be demanded of them in representing you in the House of Delegates. I would further remind you that after the meeting is over, if your county society has not been represented, you have very little "room to gripe" about the decisions that have been made.

The Constitution of your Association says, in part, "The House of Delegates shall be the legislative body of the Association and shall have power, by two-thirds vote of all the delegates present at that session, to adopt bylaws to carry out the provisions of this Constitution and **to provide for the government of the Association in any other manner not inconsistent with this Constitution.**"

What I am really saying to you is that your House of Delegates is the most important policy-making body of this Association. It behooves you, if you are a delegate, to make every effort to be present to take a part in the deliberations. Nineteen hundred and seventy-three will be a year of major decisions. Do not fail to make every possible effort to be a part of that decision-making process if you are called upon to serve as a member of the House of Delegates.

*Lee C. Hesse, Jr.*



## PUBLIC HEALTH PAGE



### State Health Department Sickle Cell Testing and Counseling Program†

WILLIAM P. McELWAIN, M.D., M.P.H.

*Commissioner of Health*

*Commonwealth of Kentucky*

**I**N 1970, news media and professional literature proclaimed sickle cell anemia one of the most neglected major health problems in the nation occurring more frequently than other genetic disorders, such as cystic fibrosis and phenylketonuria, in the population at risk.

Sickle cell anemia is inherited by autosomal recessive transmission and national estimates indicate that one in 500 Blacks is born with the disease and approximately one in ten carries the trait. As screening procedures and methods for definitive identification of abnormal hemoglobins became available, mass screening programs to identify people with the trait and disease were implemented as a public health measure.

Kentucky's screening program was initiated in 1971. To date approximately 15,000 people have been tested on a voluntary basis and those with abnormal findings counseled. As a result of public interest and increasing community awareness, the Kentucky State Legislature enacted into law a bill requiring mandatory testing of all Black newborns and all Blacks applying for marriage licenses. This law was implemented by the State Department of Health on March 16, 1973.

The section of the law citing the physician's responsibility relative to the premarital tests reads:

†This article was prepared by: Alma Jones, R.N., Coordinator, Sickle Cell Program, Office of Local Health, Department of Health, 275 East Main Street, Frankfort, Kentucky 40601

In the event the applicants for a marriage license are of the Negro race the examining physician shall obtain an appropriate blood specimen from each applicant and forward same to the Division of Laboratory Services, State Department of Health, or to a laboratory approved by the Department, to ascertain the existence or nonexistence of sickle cell trait or disease. In the event the laboratory tests indicate that both applicants are carriers of the trait or disease, the physician shall provide genetic counseling or refer the applicants to the Department or to an agency approved by the Department for such counseling.

The Premarital Sickle Cell Certificate and all supplies and materials necessary for sample submission are available to physicians through the local health departments. The Premarital Sickle Cell Certificate along with the Premarital Medical Certificate must be filed with the county court clerk before the marriage license can be issued. Although the physician must wait for VDRL test results before signing the Premarital Medical Certificate, his signature on the Premarital Sickle Cell Certificate merely certifies that the specimen has been collected and submitted for analysis or that a previous test result from an approved laboratory has been recorded. Since there is no waiting period for reports of laboratory results, the applicant should encounter no delays or inconveniences due to the requirements of the sickle cell law.

The counseling requirement is applicable only when both applicants carry the sickle cell trait. In such marriages there is a 25% probability with each conception that the child will be born with sickle cell anemia; therefore, the counseling provision is considered to be one of the most important aspects of the law. To ful-



fill its responsibility for the administration and enforcement of this portion of the law, it is necessary that the Sick Cell Program Office of the State Health Department receive from the physician a copy of the premarital certificate.

The section of the law pertaining to the testing of Black newborns states that:

Every physician and every other person legally permitted to engage in attendance at delivery of a pregnant woman shall take or cause to be taken an appropriate blood specimen from each newborn of the Negro race and forward same to the Division of Laboratory Services, State Department of Health, or to a laboratory approved by the Department, to ascertain the existence or nonexistence of sickle cell trait or disease. In the event the laboratory test indicates that the newborn has sickle cell disease the physician shall provide genetic counseling to the parents or refer them to the Department or to an agency approved by the Department for such counseling. The Department shall furnish consultative services to the attending physician upon his request.

An "appropriate test" has been defined as 5cc of cord blood taken by the physician at the time of delivery. Although the physician is notified of all test results, when sickle cell trait or disease is detected in the newborn, the Sick Cell Program Office of the State Department of Health also issues a Sick Cell Counseling Certificate which the physician completes certifying that he has counseled the parents or that he is referring the parents to the Department for counseling. Since cord blood analysis for hemoglobinopathies is a relatively new area in laboratory technology and until

there is reasonable certainty that all detectable abnormalities are being identified, it is recommended that infants be retested at six months of age.

All blood samples submitted to the State Department of Health Laboratory are screened initially by hemoglobin electrophoresis; solubility and or citrate agar are utilized for further differentiation and confirmation of abnormal findings. This procedure is in accord with Federal guidelines and recommendations of the National Center of Disease Control in Atlanta.

Analysis of test results for April and May of 1973, with 2,737 tests performed, indicates that 9.2% of those tested were found to carry an abnormal trait and 0.22% had laboratory findings indicative of sickle cell disease.

	Number Tested	Normal	Trait	Disease
Premarital	679			
Newborn	500			
Voluntary	1,558			
TOTAL	2,737	2,479	252	6

Although the desirability and constitutionality of laws requiring sickle cell testing may be debatable, few will question the advantage of early detection of the disease. There is, as yet, no cure; but early diagnosis will surely aid the physician in planning with parents to provide the best possible care for children with the disease. And knowledge of the probability of producing children with a chronic, debilitating disease, such as sickle cell anemia, is surely a factor worthy of consideration for the young married couple.

George M. Hope, M.A., Ph.D., Louisville, and Anthony R. Marsicano, M.D., Lexington, were recently awarded research project grants from the Southern Medical Association. The physicians were two of 29 researchers, selected from more than 100 applicants, to receive SMA research grants this year.

William H. McBeath, M.D., M.P.H., Lexington, has now assumed the position as Executive Director of the American Public Health Association. Doctor McBeath had been the Director of the Ohio Valley Regional Medical Program since 1966, assuming that post after two years as Director of the Kentucky State Department of Health's Division of Medical Care.

#### M. D. Recruitment

Physicians wanted for a family health center which is developing on a prepaid group practice pattern (H.M.O.). Board certified or qualified family physicians, internists, pediatricians, and obstetricians. Must be Kentucky licensed. Must be qualified for hospital staff appointment. Salary plus attractive fringe benefits depending upon qualifications and experience.

Direct inquiries to:

ParkHill Family Health Center  
Fincastle Building—Suite 419  
Louisville, Kentucky 40202

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*From the files of the*

COMMITTEE FOR THE  
**STUDY OF MATERNAL MORTALITY**

---

**T**HIS 24-year-old married white, gravida 1, para 0, was admitted to the hospital at 8:30 a.m., 4-3-71, for induction of labor. The EDC was 3-30-71. She was obese, weighing 224 lbs., and her blood pressure on admission was 130/90.

Examination on admission revealed a cephalic presentation with intact membranes. The cervix was 75% effaced and 4 cm dilated. The fetal heart tones were 130 per minute. Her temperature was 101.8 on admission. 1000 cc D5W was started at 10:30 a.m. She began having contractions described as mild every five to fifteen minutes around 2 p.m. when her membranes ruptured spontaneously.

At 4:45 p.m. the cervix was 5 cm dilated, completely effaced, the presenting part was a -1 station. She received 50 mg Vistaril intramuscularly at this time. At 5:15 p.m. she received 50 mg Demerol and 1/150 gr Scopalamine intravenously with another 50 mg Demerol intravenously at 6:30 p.m. Vaginal examination at 7:00 p.m. revealed 6 cm dilation -1 station. She received another 50 mg Demerol intravenously at 7:45 p.m.

At 9:45 p.m. a rim of cervix remained with the presenting part remaining at -1 station. She received another 50 mg Demerol intravenously at 10:15 p.m. Her contractions were occurring every three minutes at 11:15 p.m., with the rim of cervix remaining and the presenting parts 0 to +1 station. She was examined by her physician at 1:10 a.m., 4-4-71, and still had the rim of cervix. She received 50 mg Demerol with 1/200 Scopalamine intravenously at this time. Oxytocin infusion was started at 4:30 a.m., 500 cc D5W with 5 units. She received 50 mg Demerol intravenously at 5:45 a.m. (total in labor 300 mg).

At 6:45 a.m. vaginal examination revealed the cervix completely dilated +1 station. She was given a saddle block anesthesia at 7:10 a.m. Vaginal examination revealed LOT posi-

tion so manual rotation was performed with delivery of a living 12 lb 3 oz boy with low mid forceps and episiotomy at 8:32 a.m. The baby cried spontaneously, had good color; the right arm seemed paralyzed. However, there was no traction on the arm at delivery.

The placenta was expressed intact and the episiotomy was repaired. 1000 cc D5W with 10 units Pitocin was given plus IM Ergotrate.

The physician took the baby out to the family but was called by the nurse at 9:30 a.m. The patient's blood pressure was found to be 60/30, 10 mg Vasoxyl was given intravenously. Her blood pressure at 9:45 a.m. was 70/30, P 120, 10 mg of Vasoxyl was given intramuscularly at 10 a.m. Another 1000 cc D5W was started with Pitocin added, 10 mg of Vasoxyl was added to the IV at 10:30 a.m., her blood pressure was 66/30, P 120, R 40. Oxygen was started; her legs appeared blue. 500 cc blood was started at 11 a.m. A medical consultant checked the patient at noon. An EKG was obtained. Aramine was added to the IV, 20 mg at 11 a.m., 20 more mg at 11:30, 20 more at 11:45 and 500 D5W with 40 units Aramine at noon. She received 200 mg Solu-Cortef intravenously at 12:20 p.m., 40 mg Aramine was added to the IV at 12:20 p.m. Her blood pressure was unobtainable, her pulse 92. Another 100 mg Solu-Cortef was given intravenously at 12:45 p.m. The second 500 cc whole blood was started at 1:05 p.m. after she passed a large number of blood clots vaginally when she was examined by her physician. She received one ampule of methergine intravenously. 500 cc 6% Dextran was added. A fibrinogen level was drawn. There was a small amount of urine in the catheter. She received 200 mg of Solu-Cortef at 2:00 p.m., 1/2 cc adrenalin, the Dextran was discontinued with 200 cc remaining when more blood was available at 2:05 p.m. This, the third, 500 cc and then another 500 cc was started at 2:50 p.m. and the last



500 cc (with a total of 2,500 cc) started at 3:10 p.m. In spite of these measures she expired at 3:55 p.m. An autopsy was obtained.

There was no defect in the uterus. Sections of the lungs revealed widespread pulmonary edema, vascular congestion, with fibrin aggregates and occasional squamous debris. The final diagnosis was amniotic fluid pulmonary embolus.

#### Comment

The Committee considered this a direct obstetric death with multiple preventable factors on the part of the physician. Although its role in the final outcome of this case is unclear, the initial questionable observation was a temperature of 101.8° on admission. Certainly an elective induction of labor should not be attempted until the etiology of the temperature elevation has been established. Secondly, this patient made very poor progress; since at 9:45 she was essentially 9 cm dilated and really made little or any progress until 6:45 the next morning. Certainly with this failure to progress, a careful evaluation of the patient's status should have been performed in the intervening hours. If she was not having adequate or satisfactory uterine contractions augmentation with intravenous oxytocin should have been started before 4:30 a.m., when it was done. If she was having good labor and was still failing to make progress, then serious consideration should have been given to a Cesarean section. Many studies have shown that morbidity and mortality go up dramatically for both mother and fetus when progress in labor is ar-

rested, such as it was in this case. In retrospect this was a macrosomic baby and obviously the problem was relative cephalopelvic disproportion. The reader cannot help but wonder if the physician's suspicions should not have been high that this baby was unduly large since the patient progressed so poorly. Although abdominal examination is a very poor and inaccurate way to judge fetal size, certainly a 12 lb baby should have at least triggered some suspicion.

The next preventable factor was to treat a patient in vasomotor collapse with a blood pressure of 60/30 with intravenous pressure drugs. This surprising finding in a recent postpartum patient should always suggest massive unrecognized blood loss. Secondly, if blood loss has been excluded, more obscure etiology for shock should be suggested such as amniotic fluid embolus or gram negative septicemia. In this case, gram negative septicemia might have been a possibility since the patient was in such a prolonged labor with ruptured membranes for a considerable period of time. The aggressive treatment instituted after the onset of shock was obviously to no avail as is so often the case with amniotic fluid embolism.

In summary then, the Committee felt that this was a preventable death since the patient's prolonged labor with relative cephalopelvic disproportion showed certain elements of neglect. It is conceivable that a more aggressive and active course of management could have delivered this baby many hours earlier and prevented the ultimate outcome.

## Emergency Medicine Film Made

The President's Office of Emergency Preparedness has produced a training film entitled "Date with Disaster," which is available on a free loan basis or may be bought for \$90. A documentary of the multi-hospital preparedness model developed by the Hospital Council of Southern California, the film is intended to be a training model for communities across the nation to help them build their own emergency medical preparedness capability.

Further information may be obtained from William Gallagher, Chief, Film Distribution Branch, National Audiovisual Center, General Services Administration, Washington, D. C. 20409.

### WANTED: HEALTH OFFICER

Health Officer wanted for Floyd and Martin counties (shared) in Eastern Kentucky. If interested, contact George P. Archer, M.D. Call (606) 886-8183 or (606) 886-8221 or write P.O. Box 668, Prestonsburg, Kentucky 41653.



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TEST	HYPOTHYROID	SYNTHROID THERAPEUTIC NORMAL
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T <sub>4</sub> By Column	Less than 3 mcg %	7-9 mcg %
T <sub>3</sub> (Resin)	Less than 25%	27-35%
T <sub>3</sub> (Red Cell)	Less than 11%	11.5-18%
Free Thyroxine	Less than 0.7 nanograms %	0.7-2.5 nanograms %
Murphy-Pattee	Less than 2.9 mcg %	4-11 mcg %



**AS WITH ANY THYROID PREPARATION, CAUTIOUS OBSERVATION OF THE PATIENT DURING THE BEGINNING OF THERAPY WILL ALERT THE PHYSICIAN TO ANY UNTOWARD EFFECTS.**

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The conversion has been clinically demonstrated during the administration of  $T_4$  to athyrotic patients. Their thyroid status is normalized on SYNTHROID alone, yet the presence of  $T_3$  in these patients has been clearly shown.

## WHY DOES SYNTHROID COST LESS THAN SYNTHETIC DRUGS CONTAINING $T_3$ ?

Very simple.  $T_3$  costs more to make synthetically than does  $T_4$ . So it is economically necessary for a synthetic thyroid medication containing  $T_3$  to cost more than one containing  $T_4$  alone. Synthetic combinations cost patients nearly 50% more than SYNTHROID<sup>3</sup> because the  $T_3$  costs more to start with; also there is the additional expense of formulating a tablet containing two active ingredients.

1. Latiolais, C. J., and Berry, C. C.: Misuse of Prescription Medications by Outpatients, *Drug Intelligence & Clin. Pharm.* 3:270-7, 1969.
2. Braverman, L. E., Ingbar, S. H., and Sterling, K.: Conversion of Thyroxine ( $T_4$ ) to Triiodothyronine ( $T_3$ ) in Athyrotic Human Subjects, *J. Clin. Invest.* 49:855-64, 1970.
3. American Druggist BLUEBOOK, March, 1971.

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**Precautions:** As with other thyroid preparations, an overdose may cause diarrhea or cramps, nervousness, tremors, tachycardia, vomiting and continued weight loss. These effects may begin after four or five days or may not become apparent for one to three weeks. Patients receiving the drug should be observed closely for signs of thyrotoxicosis. If indications of overdose appear, discontinue medication for 2-6 days, then resume at a lower dosage level. In patients with diabetes mellitus, careful observations should be made for changes in insulin or other antidiabetic drug dosage requirements. If hypothyroidism is accompanied by adrenal insufficiency, as Addison's Disease (chronic subcortical insufficiency), Simmonds's Disease (panhypopituitarism) or Cushing's syndrome (hyperadrenism), these dysfunctions must be corrected prior to and during SYNTHROID (sodium levothyroxine) administration. The drug should be administered with caution to patients with cardiovascular disease; development of chest pains or other aggravations of cardiovascular disease requires a reduction in dosage.

**Contraindications:** Thyrotoxicosis, acute myocardial infarction. **Side effects:** The effects of SYNTHROID (sodium levothyroxine) therapy are slow in being manifested. Side effects, when they do occur, are secondary to increased rates of body metabolism; sweating, heart palpitations with or without pain, leg cramps, and weight loss. Diarrhea, vomiting, and nervousness have also been observed. Myxedematous patients with heart disease have died from abrupt increases in dosage of thyroid drugs. Careful observation of the patient during the beginning of any thyroid therapy will alert the physician to any untoward effects.

In most cases with side effects, a reduction of dosage followed by a more gradual adjustment upward will result in a more accurate indication of the patient's dosage requirements without the appearance of side effects.

**Dosage and Administration:** The activity of a 0.1 mg. SYNTHROID (sodium levothyroxine) TABLET is equivalent to approximately one grain thyroid, U.S.P. Administer SYNTHROID tablets as a single daily dose, preferably after breakfast. In hypothyroidism without myxedema, the usual initial adult dose is 0.1 mg. daily, and may be increased by 0.1 mg. every 30 days until proper metabolic balance is attained. Clinical evaluation should be made monthly and PBI measurements about every 90 days. Final maintenance dosage will usually range from 0.2-0.4 mg. daily. In adult myxedema, starting dose should be 0.025 mg. daily. The dose may be increased to 0.05 mg. after two weeks and to 0.1 mg. at the end of a second two weeks. The daily dose may be further increased at two-month intervals by 0.1 mg. until the optimum maintenance dose is reached (0.1-1.0 mg. daily).

**Supplied:** Tablets: 0.025 mg., 0.05 mg., 0.1 mg., 0.15 mg., 0.2 mg., 0.3 mg., 0.5 mg., scored and color-coded, in bottles of 100, 500, and 1000. Injection: 500 mcg. lyophilized active ingredient and 10 mg. of Mannitol, N.F., in 10 ml. single-dose vial, with 5 ml. vial of Sodium Chloride Injection, U.S.P., as a diluent. SYNTHROID (sodium levothyroxine) for Injection may be administered intravenously utilizing 200-400 mcg. of a solution containing 100 mcg. per ml. If significant improvement is not shown the following day, a repeat injection of 100-200 mcg. may be given.



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Morton Grove, Illinois 60053

# *The Kentucky Foundation for Medical Care*

**O**N May 23, 1973, the Kentucky Foundation for Medical Care submitted a proposal for the implementation of a Professional Standards Review Organization in Kentucky to officials of the Office of Professional Standards Review, HEW, in Washington. This proposal is the culmination of many hours of work by your Foundation, and all who had a part in it should be justifiably proud.

The Foundation's proposal embodies the principle of one statewide Professional Standards Review Organization rather than dividing the state into separate PSRO entities. Meetings have been held during the last six months with a number of members of the Health Care Delivery community in Kentucky and agreement on this concept has been universal. Endorsement of the Foundation's proposal has come from many sources—Comprehensive Health Planning, the Kentucky Hospital Association, the Jefferson County Medical Society, the Executive Committee of the Fayette County

Medical Society are but a few. The final decision as to future PSRO activity in Kentucky and the manner in which it is to be implemented will be forthcoming from the Secretary of HEW. It is anticipated that finalization of this authorization will not be received until the fall of this year, even though PSRO is to be started in January, 1974.

There are many aspects of the PSRO law which need to be understood by all physicians, for it will have a tremendous impact on the manner in which medicine is to be practiced. Your President, Doctor Lee Hess, and I have spoken on this subject on numerous occasions and hopefully, within the next few months, more information will be made available to you. In the meantime, until official designation has been received, your KFMC will continue to try to implement the PSRO law.

DAVID A. HULL, M.D., PRESIDENT  
KENTUCKY FOUNDATION FOR MEDICAL CARE





## Placidyl® (ETHCHLORVYNOL)

### Brief Summary

**Indications**—Placidyl (ethchlorvynol) is indicated as short-term hypnotic therapy in the management of insomnia.

**Contraindications**—Drug hypersensitivity and porphyria.

**Warnings**—Not recommended during the first and second trimester of pregnancy. Caution patients of possible combined exaggerated effects with alcohol, barbiturates, tranquilizers or other CNS depressants. Exaggerated effects might result in blurring of vision, paralysis of accommodation and profound hypnosis. Caution patients concerning driving a motor vehicle, operating machinery, or other hazardous operations requiring alertness after taking the drug. ADMINISTER WITH CAUTION TO PATIENTS WITH SUICIDAL TENDENCIES AND DO NOT PRESCRIBE LARGE QUANTITIES OF THE DRUG. Adjustment of the dosage of oral anticoagulants might be necessary when beginning ethchlorvynol therapy, during therapy, or after stopping therapy. This drug is not recommended for use in children. PLACIDYL HAS THE POTENTIAL FOR THE DEVELOPMENT OF PSYCHOLOGICAL AND PHYSICAL DEPENDENCE. INSTANCES OF SEVERE WITHDRAWAL SYMPTOMS, INCLUDING CONVULSIONS AND DELIRIUM CLINICALLY SIMILAR TO THOSE SEEN WITH BARBITURATES, HAVE BEEN REPORTED IN PATIENTS TAKING REGULAR DOSES AS LOW AS 1000 MG. PER DAY OVER A PERIOD OF TIME WHEN THE DRUG WAS SUDDENLY DISCONTINUED. PROLONGED ADMINISTRATION OF THE DRUG IS NOT RECOMMENDED. Addiction-prone patients or those who are likely to increase dosages of the drug on their own initiative should be observed for evidence of signs or symptoms which may indicate possible early withdrawal or abstinence symptoms. Signs and symptoms associated with withdrawal and abstinence include unusual anxiety, tremor, ataxia, slurring of speech, memory loss, perceptual distortions, irritability, agitation and delirium. Other less well defined signs and symptoms, not necessarily due to withdrawal and abstinence, may include anorexia, nausea or vomiting, weakness, dizziness, sweating, muscle twitching and weight loss. Abrupt discontinuance of Placidyl following prolonged overdosage may result in convulsions and delirium.

**Precautions**—Toxic amblyopia has been reported with long-term continuous use of ethchlorvynol. Permanent visual defects have been observed, although amblyopia has improved after discontinuation of the drug. Drug dosage should be limited for elderly and debilitated patients to the smallest effective amount. If pain is present, this drug should only be given if insomnia persists after pain is controlled with analgesics. Caution is advised in prescribing the drug for patients who are being treated with either MAO inhibitors or antidepressants. Transient delirium has been reported with the combination of Placidyl and amitriptyline. Drug dosage should be reduced if prescribed for patients receiving MAO inhibitors or antidepressants. Caution should be exercised in patients with impaired hepatic or renal function. Patients who respond unpredictably to barbiturates or alcohol, or who exhibit excitement and release of inhibition in association with such agents, may also react in this way to Placidyl. Rarely, patients may exhibit symptoms suggestive of an unusual susceptibility to the drug; such as prolonged hypnosis, profound muscular weakness, excitement, hysteria, or syncope without marked hypotension. Transient giddiness or ataxia may occur.

**Adverse Reactions**—Hypotension, nausea or vomiting, gastric upset, aftertaste, blurring of vision, dizziness, facial numbness, and allergic reaction typified by urticaria have been reported following Placidyl administration. Mild "hangover" and symptoms of mild excitation have occurred in some patients. There have been rare reports of cholestatic jaundice occurring in patients taking ethchlorvynol. A few cases of thrombocytopenia have been reported in patients receiving ethchlorvynol. 307454



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## Erythema Nodosum Secondary to the Use of Oral Contraceptive A Case Report

WARREN GRADY STUMBO, M.D.

*Hindman, Kentucky*

*Erythema nodosum presented itself as an uncommon diagnosis associated with birth control pills.*

### Case Report

ERYTHEMA nodosum is seen as a particular reaction pattern of the skin, the etiology of which is often diverse. The clinical presentation is one of painful, red, tender, non-suppurative cutaneous nodules, most commonly occurring over the extensor surfaces of the lower legs. The course of the disease is one of slow resolution over a period of weeks and associated findings of malaise, fever and joint pain are present. The disease is frequently associated with streptococcal infections, ascariasis, pharyngitis, sarcoidosis, pulmonary tuberculosis, trichophytosis, sulfonamides, iodides, bromides, and penicillin.<sup>1</sup> Erythema nodosum has been reported as a complication to oral contraceptives in the past and progestational agents have been suggested as the cause of the reaction.<sup>2-4</sup> The patients in the cited references were able to take oral contraceptives containing a different progestational agent without recurrence of symptoms.<sup>3,4</sup>

The purpose of this paper is to report an additional case of erythema nodosum from a norgestrel-ethinylestradiol combination oral contraceptive, the progestational agent differing from those previously cited.<sup>2-4</sup>

The patient was a 22-year-old multigravid female who was first seen in November, 1972, in the emergency room complaining of malaise, sore ankles and a painful nodule on the right lower leg. At that time a differential diagnosis of erysipelas and erythema nodosum was made and the patient was told to apply heat, elevate the leg and take a course of penicillin. Seven days later the patient was seen in the office. At that time there were no systemic complaints, no erythematous nodules present, but a brownish-purple area of discoloration was present on the right leg. At this time a drug history revealed the patient to have developed a similar reaction after three weeks on a combination of norgestrel-ethinylestradiol (Ovral) in 1968. The patient had been symptom-free since 1968 until a re-exposure to the norgestrel-ethinylestradiol combination in October, 1972, approximately four weeks prior to the emergency room visit. In the office in November, 1972, the patient was told to avoid contraceptives and was given aspirin and Prednisone for ten days. The patient was lost to follow-up until January, 1973, when she returned to the office symptom free. At that time, she was again placed on a period of norgestrel-ethinylestradiol contraceptives. After two and one-half weeks, erythematous nodules occurred involving both lower

legs. The laboratory studies, including x-rays of legs and chest, complete blood count, stool exam, urinalysis, LE preparation, C-reactive protein, sedimentation rate, R-A factor, SMA-12 and T<sub>4</sub> were all reported within normal limits.

The oral contraceptive was discontinued and the patient was treated with a short course of rest, aspirin and Prednisone. Since then, the patient has been symptom free.

### Discussion

The time sequence and serial relationship between the ingestion of the contraceptive and appearance of the clinical findings suggest that the drug was the etiological agent. Another cause was not ruled out with certainty, but on reviewing the history, physical and laboratory data seem to make the previously reported infections associated with erythema nodosum unlikely.

Erythema nodosum is not a common clinical diagnosis, and physicians, therefore, may not relate the findings to the ingestion of an oral contraceptive. The increasing number of patients taking oral contraceptives establishes the importance of alerting physicians to the possible association between erythema nodosum and oral contraceptives.

### Acknowledgement

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*Please mail your scientific articles to The Journal of the Kentucky Medical Association, 3532 Ephraim McDowell Drive, Louisville, Kentucky 40205.*



# Ovarian Cancer†

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*The maximum possible use of surgery and, in certain cases, the combination of surgery and radiation therapy can be effective in controlling ovarian cancer. Of great importance is determining the true extent of the disease prior to treatment.*

CANCER of the ovary represents a group of malignant diseases and not a single one. The results of treatment of each particular histopathological type should be reported including the grade of the tumor, the degree of stromal invasion and the stage of the disease. It is difficult to compare the results of series of patients treated at different institutions because the data may not be comparable.

The mortality rates for ovarian cancer have been on a plateau for many years with a slight increase in recent years. Approximately 14,000 new cases are diagnosed each year with 10,400 deaths annually. About one out of each 100 women will develop ovarian cancer during her lifetime.

It is disappointing that only a small percentage of the cases will be diagnosed while localized to one ovary or to both ovaries. As with breast cancer, only minimal symptoms are present for a long period of time. Unless physicians develop a high index of suspicion for ovarian cancer, it is most probable that the mortality rates will remain about the same. Annual clinical examinations and laboratory procedures as indicated of the breast, uterus, ovary and rectum are essential if more progress is to be made in the diagnosis of localized cancer in the female.

The staging of ovarian cancer on the basis of laparotomy, with the determination of the

stage of the disease as accurately as possible, is of considerable value both for prognosis and management. Only about 15% of the cases will be confined to one or both ovaries and/or confined to the uterus, broad ligaments or tubes. In about 25% of the cases where the disease is still confined within the pelvis but adjacent structures may be involved, the combination of surgery and radiation therapy can definitely be used to advantage.

No uniform anatomic classification has been used. In fact, unless patients have lymphangiography as well as laparotomy prior to therapy, it is difficult to know the true extent of the disease.

In some institutions, there is a variance in the histopathological diagnosis; for example, Kottmeier<sup>5</sup> reports 30% of the patients with ovarian cancer as having endometrioid carcinoma which is a well differentiated tumor with a good prognosis. Long<sup>7</sup> and Taylor reported 16.7% of the ovarian cases as of the endometrioid type. In California, only a small percentage of cases are so diagnosed, and not one case of endometrioid carcinoma in 161 cases of ovarian cancer was diagnosed at the M.D. Anderson Hospital. Schueller and Kirol<sup>14</sup> reported 37 of 337 ovarian cancers or 11% at the Buffalo General Hospital diagnosed as endometrioid carcinoma of the ovary.

The clinical staging of carcinoma of the ovary (International Federation of Gynecology and Obstetrics) is as follows:

- Stage I** — Growth limited to the ovaries.
  - Stage I-A — Growth limited to one ovary; no ascites.
  - Stage I-B — Growth limited to one or both ovaries; no ascites.
  - Stage I-C — Growth limited to one or both ovaries; ascites present with malignant cells in the fluid.
- Stage II** — Growth involving one or both ovaries with pelvic extension.
  - Stage II-A — Extension and/or metastases to the uterus and/or tubes only.

†Presented at the Third Biennial Symposium on "Cancer in Women," The Kentucky Obstetrical and Gynecologic Society, Louisville, Kentucky, May 12-13, 1972.

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Stage II-B — Extension to other pelvic tissues.

**Stage III** — Growth involving one or both ovaries with widespread intraperitoneal metastases to the abdomen (the omentum, the small intestine, and its mesentery).

**Stage IV** — Growth involving one or both ovaries with distant metastases outside the peritoneal cavity.

Munnell and Taylor<sup>11</sup> have staged ovarian cancer as follows:

**Stage I** — Cancer limited grossly to one ovary.

**Stage II** — Cancer limited grossly to both ovaries.

**Stage III** — Cancer involves one or both ovaries plus any part of the pelvic peritoneum or viscera.

**Stage IV** — Cancer involves upper abdomen.

Munnell and Taylor<sup>11</sup> reported that during a 21-year period (1922 through 1943), 200 cases of primary ovarian cancer were seen at the Sloane Hospital for Women. There were also 51 cases of recurrent or metastatic (secondary) ovarian carcinoma seen during the same period. They reviewed the statistics of 21 authors for five-year cure rates in ovarian cancer. The results varied from 6.3% to 65.4%. Their own overall results were 27.5% with 30.4% for papillary serous cystadenocarcinoma and 60% for papillary mucinous cystadenocarcinoma.

They believe that radiation therapy has a definite place in the treatment of certain cases of ovarian malignancy for palliation and for the possible cure of residual disease. They believe also that it should be given to all patients with ovarian carcinoma with extension of the tumor beyond the ovaries, regardless of the amount of spread and of the histologic type.

For Stage I ovarian cancer when only one ovary is involved and the other ovary appears to be normal, Long<sup>8</sup> recommends removal of both ovaries, tubes and uterus because the normal appearing ovary will contain metastases in 17% of cases and there will be an occasional occurrence of endometrial metastases. Munnell

and Taylor<sup>11</sup> also recommend removal of both ovaries, tubes and uterus for unilateral ovarian carcinoma. Radiation therapy is not recommended for Stage I ovarian cancer. The criteria for the use of combinations of therapy, such as surgery and radiation therapy, are that the combined therapy will produce better results than any one method of therapy without a significant increase in morbidity or mortality.

The recommended management of ovarian cancer is as follows:

**Stage I** (including I-A, I-B, and I-C): Surgery only, to include hysterectomy, bilateral salpingo-oophorectomy and probably omentectomy. No radiation therapy or chemotherapy.

**Stage II** Careful meticulous surgery consisting of hysterectomy and bilateral salpingo-oophorectomy, omentectomy and the removal of all gross tumor. Until now, only the pelvis has received radiation therapy to a tumor dose of approximately 5,500 rads. It is quite possible that if the abdomen received a tumor dose of 4,000 rads with the liver and kidneys shielded at 2,000 rads) in addition to the pelvic tumor dose, that the five-year survival rates would be increased. At any rate, the use of surgery plus postoperative radiation therapy has definitely increased the five-year survival rates. For example, Chu<sup>1</sup> reported 16.7% five-year survival following surgery only, and 31.4% following combined surgery and radiation therapy.

Delclos and Quinlan,<sup>2</sup> in treating papillary serous adenocarcinoma of the ovary Stage II, obtained four-year survival figures of 40% for irradiation of the pelvis only, 43% following whole abdomen irradiation, and 82% following whole abdomen and pelvis irradiation. Only a small number of patients were so treated.

Hanks and Bagshaw<sup>3</sup> reported a five-year survival of 82% with anatomic Stage II ovarian carcinoma (gross total removal of cancer) treated with a tumor dose of 5,500 rads delivered to the mid plane of the lower abdomen in six weeks. The entire peritoneal surface from the pelvic floor to the level of the umbilicus was irradiated. Thio-Tepa diluted in saline



was instilled in the peritoneal cavity at the time of surgery for those patients where spillage from the cyst occurred.

In 1963, Kottmeier<sup>6</sup> discussed laparotomy and biopsy of the suspected ovarian lesion and preoperative irradiation followed by surgery. He stated that the combined use of preoperative radiation and surgery in cases of ovarian carcinoma fixed to surrounding organs had been encouraging.

Vaeth and Buschke<sup>17</sup> advocate the use of preoperative radiation therapy for Stage II ovarian carcinoma following biopsy and evaluation of the extent of the disease. Megavoltage radiation therapy is used and from 5,000 to 5,500 rads is given to the mid pelvis in six to seven weeks. There were 10 Stage II and 13 Stage III patients. There was bilateral ovarian involvement in 22 of the 23 patients. Omental involvement was noted in nine of the 23 patients. Pelvic and/or para-aortic lymph node metastases were not described in nine of the 23 cases, were involved in four, and not found in 10 patients. When treatment of the upper abdomen was decided upon, approximately 3,000 rads were delivered to the upper abdomen.

Long, et. al.,<sup>9</sup> in 1963, reported a series of eight patients with locally advanced (Stage III) ovarian cancer treated by preoperative radiation followed by radical surgical resection. None of these eight patients died of recurrent disease during an eight-year follow-up study.

Munnell<sup>10</sup> reviewed the results of treatment of 235 cases of ovarian cancer between 1952 and 1961, and compared the results with 200 cases treated between 1922 and 1943, and with 148 cases treated between 1944 and 1951. There was a 40% survival in the most recent series as compared to a 28% survival in each of the two previous series. The improvement was considered to be the result of more aggressive and extensive surgery and to the more frequent use of postoperative radiation therapy. The basic concept of the treatment of ovarian cancer was recommended to be the maximum possible use of surgery, consisting of omentectomy, appendectomy and local bowel resections for localized metastases, and total hysterectomy and bilateral salpingo-oophorectomy. The routine use of postoperative radiation therapy was recommended when the disease

had spread beyond the ovaries.

Rubin, et. al.,<sup>13</sup> in an attempt to assess the value of postoperative radiation therapy for ovarian cancer chose Stage III disease because failure to control residual disease in this stage would be attributable to the radiation therapy. He reported a series of cases by various authors in which there was a significant increase in survival when both surgery and radiation therapy were used. He also stated that to deny radiation therapy to patients who have unresectable gross residual pelvic disease cannot be justified on the basis of available data. Not all reports are favorable for combined surgery and radiation therapy, but the great majority are.

The gynecologist with a special interest in cancer is the logical physician to become the captain of the team in managing patients with ovarian cancer. He must know the advantages and disadvantages of combinations of therapy; e.g., surgery and/or irradiation therapy, with or without chemotherapy. The quality of survival is more important than the mere duration of existence. A systematic follow-up plan must be carried out with high index of suspicion for the recognition of persistent or recurrent disease. The successful management of patients with ovarian cancer requires close cooperation between the gynecologist, the pathologist, the diagnostic radiologist, the radiation therapist and the chemotherapist.

During the period 1955 to 1959, there were 228 cases of ovarian cancer admitted to the UCLA Hospital with only 43 (18%) of this group in a localized stage. Of the localized or Stage I patients, 11 had surgery only with 79.2% five-year survival and 29 had surgery and irradiation or 83.7%. The figures from the California Tumor Registry were 1,118 surgery only with 76.9% five-year survival and 66.7% for 514 patients who had surgery plus radiation therapy.

Of those patients who had surgery and irradiation, all stages, 127 or 38.7% lived five years; there were 2,072 patients, all stages, California Tumor Registry of 35.9% who had surgery and irradiation and who survived five years. Seventy-five per cent of all the patients seen at UCLA with ovarian cancer were in the advanced stage. Of 88 patients who had surgery and radiation therapy for advanced dis-

ease, 22.5% were alive at five years and 18.7% of 1,122 cases so treated who are recorded in the California Tumor Registry.

For more than four years, a new technique has been used at UCLA for protecting the kidney from radiation damage in patients who have extensive intra-abdominal disease.<sup>15,16</sup>

The method consists of the introduction of a radio-opaque catheter percutaneously (Seldinger technique) via a femoral or axillary artery into one renal artery, followed by the infusion of small amounts of epinephrine into the catheterized renal artery before and during abdominal radiation therapy. The amounts of epinephrine which are used cause marked local vasoconstriction of the renal artery and decrease in the blood flow to the kidney unilaterally with the result of a temporary renal hypoxia.

Epinephrine is infused at the rate of 4.2 micrograms per minute for four minutes before each treatment and then during the radiation therapy. About 900 rads tumor dose is given weekly to the mid plane of the entire abdomen and pelvis. After a tumor dose of 1600 to 2000 rads is given the renal catheter is removed and the patient given two to four weeks rest and then the catheter is reinserted and the same procedure followed and about 1600 to 2000 rads dose delivered to the mid plane of the abdomen and pelvis.

It is interesting that seven patients have received from 3000 to 3500 rads to the entire liver without suffering any obvious ill effects.

The tolerance of the liver to ionizing radiation is markedly radiation dose dependent when the entire liver is being irradiated. Kaplan,<sup>4</sup> et. al., reviewed 40 cases in which the entire liver was irradiated with 5 to 6 Mev linear accelerator x-rays to a median dose of 3,900 rads (range: 1,300 rads in 18 days to 5,100 rads in 40 days). They observed clinical evidence of hepatic injury in 13 cases, seven of which were substantiated by needle biopsy.

### Conclusions

The mortality rates for cancer of the ovary have been on a plateau for many years. Approximately one out of each 100 women will develop ovarian cancer during their lifetime.

Approximately 15 to 18% of the cases will be confined to one or both ovaries and/or confined to the uterus, broad ligaments, or tubes.

The gynecologist with a special interest in cancer is the logical physician to be the captain of the team in managing the patient with ovarian cancer.

Radiation therapy has a definite place in the treatment of certain cases of ovarian malignancy as adjunct therapy for cure and for palliation. Pre-treatment lymphangiography can be most helpful in staging the extent of the disease.

Unless physicians develop a high index of suspicion for ovarian cancer, it is most probable that there will be no improvement in the mortality rates.

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# Total Hip Replacement

BERNARD L. MANALE, M.D.\*, DAVID P. THOMAS, M.D.\*\* AND  
THOMAS D. BROWER, M.D.\*\*\*

Lexington, Kentucky

*Until recently, surgery for arthritis of the hip produced limited results, and required prolonged postoperative rehabilitation. Now total hip replacement dramatically relieves pain, restores hip motion and requires a short hospital stay.*

**P**AINFUL arthritic hip disease has long been a problem for the aging adult and a challenge to the orthopedic surgeon.

In the early part of this century, the first attempts were made to perform an arthroplasty of the hip. This procedure consisted of fashioning the head of the femur and the acetabulum into rather congruous surfaces and using fascia as an interposing membrane. By the late 1930's stainless steel was used as the interposing material and this operation was known as the mold or cup arthroplasty. In the late 1940's a stainless steel prosthesis was fashioned for the head and neck of the femur. Initially this device, the endoprosthesis, was used for treatment of fresh fractures of the neck of the femur. Later it was used as an arthroplasty in painful hip disease. These procedures all required prolonged postoperative physical therapy and the results were unpredictable<sup>1,8</sup>. Another method of treating a painful hip is to excise the head and neck of the femur. Although such a procedure relieves pain, it obviously results in an unstable hip joint and shortened extremity<sup>10</sup>. Fusion or arthrodesis of a painful hip has always been an excellent treatment but this procedure is not applicable to patients over 50 years of age, or patients with bilateral hip disease. Of course, the pain relief is obtained at the cost of total loss of motion<sup>14</sup>.

In general, these operations have been useful for selected cases, depending on the nature of

the disease, the age of the patient and other factors. Since the appearance of the total hip replacement, however, the orthopedic surgeon now has at his disposal a vastly more reliable means of achieving pain relief and restoring motion<sup>11-13</sup>.

Advances in technology and engineering have produced highly refined and machined plastics and metals which have allowed the development of the total hip replacement. It is the purpose of this paper to present an up-to-date review of the total hip replacement operation, with emphasis on explanation of the materials involved, the indications for the procedure, and the results obtained so far by the authors.

## Materials

The total hip appliance consists of two basic components—a prosthetic femoral head and neck, and a prosthetic acetabulum. There are three possible combinations—a metal femoral prosthesis articulating with a metal acetabular component, a metal acetabular prosthesis articulating with a plastic femoral head and finally, a metal femoral prosthesis articulating with a plastic acetabular component. These variables, with many different designs, have led to scores of models of total hip devices. This paper will concentrate on the metal femoral head-plastic acetabulum combinations designed by Charnley, Müller, and Aufranc-Turner. This combination has won almost universal acceptance<sup>3,9</sup>.

The acetabular cup consists of a plastic, high density polyethylene. A metal wire is incorporated into the rim to allow roentgenographic visualization. The cup is held to the pelvis by a cement, methylmethacrylate. The cement is obtained by mixing the powdered polymer with a liquid monomer. A small amount of barium sulfate is added which allows roentgenographic identification. There is no chemical bonding of cement to bone; fixation is obtained by contact of the cement with the innumerable bony trabeculae of cancellous bone<sup>2</sup>.

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The femoral component, composed of a highly refined steel alloy and having a highly polished head, is inserted into the medullary canal of the femur. Prior to insertion of this device, methylmethacrylate cement is pushed down into the medullary canal to secure firm fixation. The new hip joint therefore consists of a metal head articulating in a plastic socket, each held to bone mechanically by a plastic polymer.

Questions have arisen regarding the reaction of the body to these foreign materials. At the present time, there has been no documented case of neoplasm arising from these materials in humans<sup>7</sup>. In fact, the acceptance of these materials by the living tissue has been quite amazing, and the likelihood of an untoward reaction by the body appears such a remote possibility that it is not a deterrent in selection of the patient for hip replacement.

#### Indications

The total hip replacement procedure is useful in the treatment of any disease process which results in a painful and stiff hip. For the

patient age 50 years or more with unilateral arthritic disease, as evidenced by clinical and roentgenographic exam, total hip replacement is the treatment of choice. When the disease is bilateral, such as in rheumatoid arthritis or idiopathic avascular necrosis, the **age** of the patient becomes less of a factor in selection, and the treatment of the **disease** becomes the primary consideration. Often the family physician, who may have been following his patient for years, will realize how greatly the younger person needs pain relief, and may have exhausted conservative means, including potentially dangerous narcotics. In these cases, there is no substitute for a discussion of the patient's needs by the referring physician and his orthopedic consultant. Many candidates for total hip replacement have complicated disease of other organ systems; such patients require thorough evaluation before the orthopedic surgeon proceeds with elective surgery.

In general, the primary indication for surgery is **pain**. Consideration is also given to the *range of motion* of the joint as well as degree of *impairment of gait* (e.g. use of canes, crutches, wheelchair, etc.). Total hip replacement has



FIG. 1 and FIG. 2: Case 1





FIG. 3 and FIG. 4: Case 2

proven successful in treating the following diseases: osteoarthritis, rheumatoid arthritis, ankylosing spondylitis, avascular necrosis, pseudarthrosis following attempted fusion, unsuccessful cup arthroplasty, failed osteotomy procedures, non-union of fractures of the neck of the femur, and painful endoprostheses<sup>4,5,6</sup>.

The youngest patient in our series was a girl of 17 who suffered crippling avascular necrosis of the femoral heads as a result of steroid therapy following successful renal transplantation. Our oldest patient was an 82-year-old man who underwent bilateral operations for severe degenerative arthritis which made him practically wheelchair bound.

### Results

From February to December, 1972, the authors performed a total of 70 total hip replacements on 65 patients. The results have been dramatic. Because of the short period of follow-up, only individual illustrative cases will be presented. Naturally, long term results will determine the ultimate fate of this procedure.

**CASE 1 (E.A.)**—This 70-year-old physician's wife had residuals of poliomyelitis involving the right lower extremity. She presented to the Lexington Clinic complaining of increasing pain and restricted motion involving the left hip, (FIG. 1) and she required a cane. After a total hip replacement on the left, the patient had complete pain relief and walked without a cane. The range of motion has improved by 25%. (FIG. 2)

**CASE 2 (P.B.)**—This 82-year-old man developed progressive pain in both hips and con-

comitant loss of motion due to osteoarthritis. On examination, he had less than 30% of motion of the hips, and was awakened by night pain. He held onto objects for walking, and was beginning to spend most of his day in bed. (FIG. 3) After bilateral Müller total hip replacements, the patient sleeps all night, is practically pain free, and has regained 60% of his range of motion. He uses a single cane. (FIG. 4)

**CASE 3 (E.R.)**—A 64-year-old attorney's wife presented with a painful endoprosthesis inserted for a hip fracture in May, 1971. She developed a painful hip with mild protrusio acetabuli resulting in limited hip motion and requiring a cane for ambulation. (FIG. 5) After a Müller total hip replacement, she had no pain, walked without a cane, and her range of motion was improved by 30%. (FIG. 6)

**CASE 4 (L.H.)**—This 41-year-old lady sustained a fracture of the left hip in an auto accident in 1967. Initially, internal fixation was performed, but non-union developed and a bone grafting procedure was carried out later in 1969. She complained of severe pain and limited motion when first seen at the University of Kentucky Medical Center in 1970. (FIG. 7) Treatment began with removal of the internal fixation device and the necrotic head and neck of the femur. Five months later a Müller total hip was inserted. She now has much less pain than at any time since her initial fracture in 1967, and walks with one cane. (FIG. 8)

**CASE 5 (J.H.)**—This 50-year-old diabetic male sustained a traumatic dislocation of the

left hip in 1968. Avascular necrosis and arthritis developed. Cup arthroplasty was performed. (FIG. 9) In 1970, he complained of severe pain, demonstrated a lurching gait, and loss of 50% of the motion of the left hip. After a Charnley total hip replacement, his pain was dramatically relieved and his gait was improved, although some restriction of motion persists. (FIG. 10)

**CASE 6 (R.B.)**—This 49-year-old female sustained a fracture of the neck of the left femur in January, 1970. The fracture was internally fixed, but the nail was removed some months later because of the pain. When first seen at the University of Kentucky Medical Center, she demonstrated shortening of the limb, atrophy, limited range of motion and complained of pain. Roentgenograms showed non-union of the fracture with questionable viability of the head. (FIG. 11) Because she was only 49 years of age, salvage was attempted by a modified McMurray osteotomy. Several months later, her symptoms had worsened and x-ray examination indicated avascular necrosis

of the head of the femur. (FIG. 12) Charnley total hip replacement was performed. (FIG. 13) At surgery, there was non-union of the original fracture and avascular necrosis of the head of the femur.

**Case 7 (L.S.)**—This 28-year-old male developed idiopathic thrombocytopenia purpura while in the Armed Forces. Treatment consisted of high doses of steroids followed by a splenectomy. When first seen at the Veteran's Administration Hospital, he complained of night pain, used a cane for ambulation, and was taking large doses of analgesics. Because of the severe bilateral avascular necrosis, the left hip, the most symptomatic, was replaced using the Aufranc-Turner device. (FIG. 14) Within three months of surgery, the patient was pain free and walked without a cane. He continues to have mild pain on the right.

Complications have been encountered, but are infrequent. So far, we have had no wound infections. Most patients were given prophylactic antibiotics, but a few were not. One patient possibly had a pulmonary embolism, but by the time she was seen for thorough evalu-



FIG. 5 and FIG. 6: Case 3





FIG. 7 (above) and FIG. 8 (right): Case 4

ation, she was asymptomatic. There have been three dislocations; two were reduced closed. The third is still chronically dislocated but because of unrelated disease, the patient is not suitable for surgery at present. One patient required re-exploration 72 hours after surgery because of wound hematoma. He recovered. One patient died of unrelated disease since his surgery. There have been no deaths other than this. So far we have not encountered loosening or wearing of the prosthetic components.

### Summary

Total hip replacement, utilizing components of high density polyethylene and steel alloy, and held securely by methylmethacrylate cement,



appears to be a safe procedure, with predictably excellent results. Although several years will be needed to thoroughly evaluate the results, at present this operation is considered one of the most useful procedures in all of orthopedic surgery.

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FIG. 9 and FIG. 10: Case 5

FIG. 11 (below), FIG. 12 (2nd below)  
and FIG. 13 (right): Case 6



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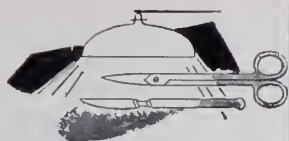
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# GRAND ROUNDS



The University of Kentucky College of Medicine

This Journal feature will be presented alternately by the University of Louisville and the University of Kentucky Departments of Medicine and Departments of Surgery. We hope to have these features revolve around subjects of immediate practical interest to the practicing physician; and, for those of us not able to attend grand rounds in the teaching centers as often as we might, we hope this will represent a bit of a refresher course.

## Primary Aldosteronism

### Patient Presentation

**M**R. S is a 44-year-old Caucasian man with a seven year history of hypertension. He was first evaluated at the University of Kentucky Medical Center in 1971. Prior to that time he had been on a variety of anti-hypertension agents with relatively poor control of his blood pressure. On admission he presented with a supine blood pressure of 230/150 mm Hg. He had grade II hypertensive retinopathy and a prominent presystolic gallop. The remainder of the physical exam was essentially normal. Serum electrolyte concentrations were as follows: sodium 145 mEq/L, potassium 1.8 mEq/L,  $\text{CO}_2$  29 mEq/L, chloride 100 mEq/L. Measurement of 24-hour VMA excretion, a hypertensive IVP and creatinine clearance were all normal. EKG demonstrated left ventricular hypertrophy, and a glucose tolerance test indicated mild carbohydrate intolerance. On a high sodium diet the aldosterone excretion rate was 30 mcg/24 hr (normal 2.0-26). Plasma renin activity was 300 ng/100 ml/3 hrs (normal 50-300). It was felt the patient had severe essential hypertension with secondary aldosteronism. He was discharged on an anti-hypertensive regimen including triamterene, Aldomet, hydralazine, guanethidine and elixir of potassium chloride. His blood pressure was reasonably well controlled for several months until he stopped returning for follow-up visits. During the year prior to the present admission he was taking one "water pill" a day and 5 tsp of potassium (dose not known) per day.

At the time of this admission he presented to the emergency room complaining of fatigue

and muscle weakness. He had difficulty standing up from a chair. Additionally, he reported nocturia four or five times a night, generally urinating copious volumes. There was no history of chest pain or symptoms of congestive heart failure.

On physical exam he presented as a pleasant, obese male in no acute distress. Supine and standing blood pressures were 180/120 mm Hg and 164/120 mm Hg, respectively. His pulse was 72 and regular. Moderate AV nicking and increased arterial tortuosity were observed in the fundi. There were no hemorrhages or exudates. The neck veins were not distended, the thyroid was not enlarged and there were no carotid bruits. Examination of the chest was normal. Examination of the heart again revealed a prominent apical presystolic gallop. There were no palpable organs or masses in the abdomen and no audible abdominal bruits. There was no peripheral edema, and the remainder of the physical examination was normal. Admission electrolytes were as follows: sodium 144 mEq/L, potassium 1.8 mEq/L,  $\text{CO}_2$  25 mEq/L, chloride 101 mEq/L. EKG demonstrated left ventricular hypertrophy and prominent U waves. Urinalysis and culture were normal and a 24-hour creatinine clearance was 127 cc/min. VMA excretion, 17-hydroxy steroid excretion and plasma cortisol concentrations were normal. Despite the hypokalemia, the 24-hour urinary potassium excretion rate was 97 mEq.

The patient's hypokalemia was corrected with exogenous potassium therapy and he was placed on a 200 mEq sodium, 100 mEq potassium diet for one week. On this regimen he continued to excrete inappropriately high amounts of potassium. On the final two days of the high salt diet, his aldosterone excretion

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rates were 39 mcg/24 hrs and 53 mcg/24 hrs (normal 2-26). Plasma renin activity was undetectable in the supine position and following four hours of standing, rose to 0.2 ng/ml/hr. This is the lowest renin level detectable by our assay. In normal subjects on a high sodium regimen, after four hours of the upright position our normal renin activity is 3.8 ng/ml/hr  $\pm$  0.8 SE. Following two days of a 22 mEq sodium diet and 80 mg of Lasix per day, the patient's aldosterone excretion rates were 45 mcg/24 hrs and 38 mcg/24 hrs. Renin activity was again undetectable in the supine position and was 0.6 ng/ml/hr after four hours of standing.

Because of this patient's potassium losing tendency, an elevated aldosterone excretion rate that was not suppressed with a salt load, and very low renin levels that were not appreciably stimulated by sodium depletion it was felt that the patient had primary aldosteronism. Adrenal vein cannulation was attempted both to collect plasma for measurement of aldosterone from each adrenal vein and to perform adrenal venography in an attempt to visualize a tumor. For technical reasons, neither adrenal vein could be cannulated. The patient was placed on spironolactone 400 mg/day and discharged to be followed as an out-patient. He is tentatively scheduled to return for surgery in one month.

### Discussion

The patient being discussed today presented with hypertension, muscle weakness and polyuria. Primary aldosteronism is usually, but not invariably, associated with mild or moderate hypertension, and Mr. S's extremely high blood pressures are somewhat unusual. Both weakness and polyuria may be related to potassium deficiency, and in fact after correction of his hypokalemia, these symptoms were no longer present. The demonstration of unprovoked hypokalemia, in a hypertensive patient strongly suggests a mineralocorticoid etiology for hypertension. In two separate series, the incidence of primary aldosteronism in hypertensive patients with unprovoked hypokalemia (hypokalemia that appears in the absence of diuretic therapy, vomiting, etc.) was 40%. Consequently any hypertensive patient who presents with hypokalemia at a time when he is not on diuretic therapy merits

a complete evaluation for primary aldosteronism.

Before discussing the various maneuvers to make the diagnosis of primary aldosteronism, I think it is appropriate to briefly review the biochemistry of the renin-aldosterone system. Renin is a proteolytic enzyme secreted by the juxtaglomerular apparatus of the kidney in response to both sodium depletion and reduction of vascular volume. In the circulation, renin cleaves a larger protein, renin substrate, to form a decapeptide, angiotensin I. Angiotensin I is rapidly converted, primarily within the pulmonary circulation, to an octapeptide, angiotensin II. In addition to being a potent pressor substance, angiotensin II normally stimulates the zona glomerulosa of the adrenal cortex to secrete a mineralocorticoid, aldosterone. Aldosterone causes sodium retention, and via a negative feedback mechanism, renin suppression. In instances of secondary aldosteronism, aldosterone is stimulated by the renin-angiotensin system, and measurements of both renin and aldosterone are elevated. However, in patients with primary aldosteronism, the adrenal gland autonomously secretes aldosterone resulting in sodium retention with renin suppression. Consequently, in primary aldosteronism, unlike secondary aldosteronism, renin concentration is low at a time when aldosterone secretion is increased. Both primary and secondary aldosteronism may cause hypokalemia, and the only way to distinguish between these two entities is to measure plasma renin.

In a hypertensive patient, an alkaline urine pH, an increased sodium to potassium ratio in saliva, and an exaggerated kaliuresis following thiazide diuretics might all suggest a mineralocorticoid excess. In my experience, the single most reliable and practical screening test for primary aldosteronism is the measurement of plasma potassium concentration at a time when a patient is consuming a high sodium intake and not on diuretic therapy. The demonstration of hypokalemia on this regimen warrants further evaluation for primary aldosteronism. Normokalemic primary aldosteronism has been reported, although this is an extremely unusual occurrence. However, such patients will not be detected if measurement of plasma potassium concentration is the sole screening procedure. Measurement of plasma renin activity may also be used as a



screening procedure, but this is not practical for two reasons. First, renin measurements are not yet widely available. Secondly, approximately 25% of patients with essential hypertension, similar to patients with primary aldosteronism, also have suppressed renin levels for reasons that are not apparent. Finally, it has been suggested that patients with primary aldosteronism have a greater hypotensive response to the mineralocorticoid antagonist spironolactone than do patients with essential hypertension. However, some patients with essential hypertension may also have a significant reduction of blood pressure on spironolactone.

Having demonstrated the presence of unprovoked hypokalemia in a hypertensive patient, the definitive evaluation for primary aldosteronism involves placing the patient on a high sodium intake and demonstrating that aldosterone is inappropriately elevated at a time when renin is suppressed. A high sodium intake may be a dietary regimen of 200-250 mEq of sodium for five to seven days or alternatively the patient may be given 2 liters of intravenous normal saline on each of two successive days. At the completion of either regimen either plasma aldosterone concentration or urinary aldosterone excretion or secretion rates should be measured. Concomitant measurements of plasma renin activity in both the supine and standing position (4 hours) should be obtained. The upright posture normally stimulates renin release, and patients with mineralocorticoid hypertension have no significant renin response to this stimulus. Because a high sodium intake accentuates the mineralocorticoid induced kaliuresis, potassium balance must be carefully followed and the patient should receive sufficient potassium to prevent the development of hypokalemia. The demonstration of the lack of renin and aldosterone responses to sodium deprivation further supports the diagnosis of primary aldosteronism. Patients may be sodium deprived either by placing them on a 10 mEq sodium diet for five to seven days or giving them furosemide for two days. Normally this regimen will stimulate the renin-aldosterone system, resulting in a secondary aldosteronism. However, among patients with primary aldosteronism there will be no appreciable renin response. Additionally, except for rare patients with adrenal carcinomas causing primary

aldosteronism, the urine 17-hydroxy steroid excretion rate is normal.

In hypertensive patients with low renin activities and aldosterone values that are not clearly suppressed or elevated by high sodium regimen, an appropriate diagnostic maneuver would be to administer desoxycorticosterone, 10 mg intramuscularly every 12 hours for three days. On this regimen the lack of suppression of aldosterone excretion to less than 10 mcg per day strongly suggests the diagnosis of primary aldosteronism.

Because most anti-hypertensive drugs affect the renin-aldosterone system, if possible all drug therapy should be discontinued at least two weeks before doing an evaluation for primary aldosteronism. Hypokalemia may directly decrease aldosterone secretion, independent of changes in renin release. Consequently, if aldosterone is measured at a time when the patient is hypokalemic, aldosterone levels may be spuriously low. It is therefore important that the patient be normokalemic at the time of evaluation. The luteal phase of the menstrual cycle is often associated with secondary aldosteronism, presumably because of the natriuretic effect of progesterone. It is preferable not to evaluate female patients during this phase of the menstrual cycle, but rather they should be evaluated immediately following a menstrual period. Oral contraceptive agents also have an effect on the renin-aldosterone system and these agents should be discontinued at least six to eight weeks before evaluation.

Having made the clinical and chemical diagnosis of primary aldosteronism, it is important to recognize that several different adrenal pathologies may cause this interesting syndrome. Approximately two thirds of the patients in several large series have benign adrenal adenomas. The tumor is unilateral in greater than 90% of patients, although approximately 6% of patients may have bilateral adrenal tumors. Surgical removal of the tumor results in either a cure or significant improvement of both the hypertension and hypokalemia in approximately 70 to 80% of patients. As many as one third of the patients diagnosed as having primary aldosteronism may have bilateral adrenal hyperplasia rather than a single tumor. If possible, it is important to identify these patients preoperatively because their hypertension is usually not affected by

the surgical removal of both adrenal glands. Compared to patients with adenomas, the abnormalities of the renin-aldosterone system may not be as marked in patients with hyperplasia i.e., the renin activity may not be as low, the aldosterone not as high, and the hypokalemic alkalosis not as prominent. However, it is evident that there is significant overlap of these values in patients with hyperplasia and patients with adenoma. Adrenal vein catheterization provides another potential method for distinguishing between these two groups of patients. Plasma aldosterone may be measured in each adrenal vein and in patients with unilateral adenoma, the aldosterone concentration should be high on the side of the tumor. In patients with bilateral hyperplasia, aldosterone should be elevated bilaterally. Additionally, the retrograde injection of dye into the adrenal veins may allow visualization of a tumor blush. However, adrenal vein catheterization is a technically difficult and not completely benign procedure. Both adrenal infarction and rupture of the adrenal vein have been reported. In my experience unless the radiologist performing the procedure has had considerable experience, attempts at cannulating the adrenal veins have been unsuccessful. In the patient presented this morning, we attempted but were unsuccessful in cannulating the adrenal veins. Alternatively, a tumor blush may be visualized with a photoscanning procedure after the intravenous injection of radioactive, iodocholesterol. This is a safer procedure than adrenal vein catheterization but is not widely available.

For the sake of completeness, I would like to mention two other adrenal pathologies causing primary aldosteronism. There have been several case reports of a familial form of bilateral adrenal hyperplasia causing hypertension and chemical primary aldosteronism. Administration of oral dexamethasone to these patients results in a lowering of the blood pressure toward normal, correction of the hypokalemic alkalosis, and normalization of both renin and aldosterone. I would like to emphasize that this is a rare familial disease and is to be distinguished from the more prevalent form of hyperplasia mentioned previously. That form of hyperplasia does not respond to dexamethasone. Secondly, several patients with adrenal carcinomas causing pri-

mary aldosteronism have been reported. Unlike patients with benign adenomas or bilateral hyperplasia, other adrenal steroids in addition to aldosterone have also been elevated in patients with malignancy. For this reason, measurement of 17-hydroxy and 17-keto steroids is a worthwhile procedure.

As I have mentioned previously spironolactone is a mineralocorticoid antagonist, and it has been suggested that there is a good correction between the hypotensive response to this agent and the hypotensive response to the surgical correction of the primary aldosteronism. After being on 400 mg of spironolactone per day for six days, Mr. S's blood pressure this morning was 148/120 mm Hg. Hopefully this lack of response can be attributed to the short duration of therapy. However, if there is no significant blood pressure response to several weeks of spironolactone therapy, we will have to re-evaluate our present decision to recommend surgery.

Additionally, patients who for other reasons are not acceptable surgical candidates, may be treated medically with spironolactone. I prefer to start treatment with a high dose, 400 mg/day and then gradually taper the dose as control of both the hypokalemia and hypertension is achieved. Because spironolactone is a potassium retaining agent, exogenous potassium therapy is generally not indicated. In patients going to surgery, if an adrenal tumor is identified preoperatively a unilateral surgical approach is indicated. If the side of the disease is not identified preoperatively, the surgeon must be prepared to examine both adrenal glands. In several series the adenoma appears more frequently in the left rather than the right adrenal, and for this reason the left adrenal should probably be examined first. If a tumor is not found the surgeon is then obligated to evaluate the right adrenal gland. It is important to recognize that aldosterone-producing tumors are generally quite small, often less than one half centimeter in diameter, and consequently may be difficult to identify.

In summary, although the prevalence of primary aldosteronism is only 1 or 2% of hypertensive patients in several large series, the disorder is important to identify because it is a potentially surgically remediable cause of

*(Continued on Page 456)*



## SPECIAL ARTICLES

### Current Trends in Health Care The Physician's Role†

JOHN H. BUDD, M.D.\*

**M**EMBERS of the Kentucky Medical Association. Honored guests. It is a pleasure to join your exploration of the vital health care issues, and the trends in health care. It is an inspiration, too, for the thinking of the state societies is a wellspring for our actions at AMA.

My assignment is to comment on the physician's role, and it is appropriate. As changes are pondered, no commentator is more qualified than the physician, no analyst more experienced, and no critic more used to seeking solutions that are tested and reasonable.

Trends are generally in response to external influences. So in the case of trends in health care delivery the changes proposed are developed in the hope of overcoming the faults and deficits in the present system and the physician's role is to make as sure as possible that the changes eventually adopted are those which seem most likely to lessen or overcome those inadequacies which are actual, important and improvable.

Our health care system is under severe scrutiny, often unfair and destructive. There are many instant experts—economists, newspaper editors, radio and TV commentators, union leaders, politicians and comedians.

Their solutions to the problems are usually simplistic—educate more doctors, socialize the system, provide cradle to grave insurance coverage, subsidize prepaid group practice, and so on.

CBS warns: "Don't Get Sick in America!" NBC presented an abusive harangue titled "What Price Health?". These sneering denunci-

ations are disheartening and contribute nothing of informational or inspirational value.

The principal criticisms levelled at our health care system and its delivery are deficiencies in availability, quality, efficiency, preventive medicine measures, plus excesses in cost and utilization.

I have decided to take up four of the principal proposals, elaborate a bit on their purposes and potentials, and AMA's attitude toward them. They are HMO, Physician's Assistant, PSRO and NHI.

#### HMO

Basically the HMO embodies 3 elements:

1. An organized system of manpower and facilities—salaried doctors and paramedical professionals contracting to provide health services.
2. An enrolled segment of the population which contracts on either an individual or group basis—i.e. a closed panel type operation.
3. All this done on a fixed, prepaid, annual fee.

In other words the HMO guarantees to provide comprehensive health maintenance services to enrolled members by salaried physicians and paramedical employees on a prepaid capitation basis. The HMO underwrites and assumes the risk. If utilization and costs are less than anticipated, the excess may be taken as profit and bonuses, or as funds for expansion, etc. If costs exceed estimates, the HMO absorbs the loss.

Although it is popularly believed that the fear of going in the hole or the hope of realizing a profit will discourage over-utilization and cut costs. I strongly suspect there is a risk of

†Presented at the 1973 KMA Interim Meeting, March 30, Lake Barkley State Park, Cadiz

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under-utilization and the possibility too, that HMO's, if not carefully screened and monitored may attract those who wish to make a profit from managing medicine, rather than those motivated by a desire to care for people.

In addition to controlling utilization, limiting fees and costs, HMO's are intended to increase the physical and social access to care. The maldistribution of physicians and facilities is most acute in the inner city areas and sparsely settled country regions.

A question which immediately surfaces is: how successfully could rural hinterlands and urban ghettos attract whole groups of physicians when they have been hard put to get even solo practitioners?

We of AMA believe that the HMO's now being financed on a test basis by the Administration should prove their social, medical and financial viability before they are mass-produced.

If HMO's were to occupy the mainstream of health care delivery, and then flounder, then health care itself could flounder.

There are three HMO Bills before Congress this term. The Kennedy HMO and Resources Development Act proposes (a) HMO's, (b) Supplemental HMO's, (c) Health Service Organizations, (d) Area Health Education and Service Centers, (e) entities for delivery of health services in non-metropolitan areas. It is extremely comprehensive and extremely expensive. Authorizations for 1974 would exceed \$1 billion and would increase substantially each succeeding year. In addition, borrowing from the U.S. Treasury would be authorized to maintain a medical malpractice reinsurance fund, and a loan guaranty and interest subsidy fund.

The Rogers-Roy Bill is considerably less extensive. It would allow funding of additional HMO's in limited numbers on a feasibility study basis, for serving (a) indigent people, (b) rural underserved areas, (c) high risk individuals.

Senator Javits of New York also has an HMO Bill with which I am not familiar.

AMA's dilemma is whether or not to support the Rogers-Roy Bill as a stopper to the Kennedy Bill, or to support none, insisting rather that those already funded be studied before any more are established.

### Physician's Assistants

Again, the definition is difficult. There is no generally accepted definition of the P.A. AMA's working definition is "a skilled person, qualified by academic and practical training to provide patient services under the supervision and direction of a licensed physician who is responsible for the performance of the assistant."

Our insistence on a balance between skill and responsibility is a chief reason we physicians have reservations about a major role for P.A.'s, I repeat, a major role. I am aware that the University of Kentucky has shown an interest in training what are termed clinical associates. AMA too sees a place for the P.A. We have supported experimental use of them, as illustrated by the MEDEX program in the Pacific Northwest.

However, we recognize that P.A.'s could bring about a "second level" of care, which could mean "second class" care. Accordingly we favor a moratorium on licensure of any new allied health occupations until their long term viability can be defined.

Our attitude is not parochial. The Soviet Union has discovered that she was going too far in her widely-publicized use of "feldschers" the equivalent of P.A.'s. The governmentalized health care systems of Sweden and Britain would be expected to use P.A.'s to help ensure access to care, but they have very few.

The chief answer to manpower gaps, it seems to me, lies not in the creation of new branches of personnel, but in more efficient and effective use of the traditional branches, such as nurses. AMA believes that the nurse should have a greater role in the physician-nurse relationship.

### PSRO

When this legislation was under consideration by Congress, AMA questioned whether a government program of mandatory peer review geared in large part to cost control could be effective without reducing the quality of patient care. During the legislative hearings AMA opposed the Bennett PSRO Bill.

Once the Bill became law, the dilemma was whether AMA should remain aloof, let the government operate the program, which would probably fail—and we'd be blamed—or to cooperate, provide all possible leadership to



make as certain as possible that the best interests of the public and the profession are preserved. Again, if this failed, too, we'd be blamed.

The latter course was chosen.

It was felt that if we defaulted, two alternatives presented. One is that organized hospitals would seek to move into the breach and make us their subordinates in the application of care standards and review. The other alternative was that Congress would have the forces of bureaucracy, minus physicians, assume the direct handling of PSRO.

AMA's objectives regarding PSRO are now:

1. Provide input from the medical profession in drafting rules and regulations.
2. Assist medical associations in developing PSRO's. Recommend structures and operating mechanisms.
3. Aid in defining proper geographic boundaries.
4. Develop operational procedures.
5. Make sure that norms developed be proper from the medical point of view and recognize regional and local differences.

The widespread willingness of state and county medical societies to sponsor PSRO's suggests that the program, as now constituted, will succeed. AMA will do all in its power to see that suitable checks and balances are maintained between the intent of the program and the rights of physicians.

### **National Health Insurance**

On the all important issue of national health insurance we call for a solution that is realistic—fiscally and medically.

It must be realistic fiscally because America has reached a practical limit on her tax resources. The people are weary of federal programs whose tax fertilizer far exceeds their crop of benefits. Medically, any insurance program must be able to produce what its funding warrants.

The Kennedy Griffiths Bill for federalized health insurance calls for specialized taxes and general revenues that total \$57 billion per year. Its objectives would cost even more upward of \$80 billion, which means that it would be under-funded and require extra transfusions of taxes. Could the U.S. budget—a proposed \$250 billion—swallow that dinosaur?

Medicredit has been introduced. As Doctor Nesbitt noted yesterday, this AMA-sponsored bill has already 167 sponsors in the Congress, a good beginning and suggestive of a happy ending.

The nub of Medicredit, and I think all physicians should spread the word, is that it would rely on income tax **credits**, rather than sizeable tax **increases** to enable people to buy full insurance coverage.

Medicredit is a three-pronged approach to health insurance protection:

1. Those too poor to buy their own private insurance would have their premiums paid in full by the government.
2. Those who can afford to pay a part of their health insurance cost will receive government help. The less they can afford to pay, the greater the tax credit, and the more the government would pay.
3. Coverage against catastrophic illness is provided.

Medicredit is content to be a financing mechanism. It would do nothing to alter the present responsibilities of the health providers, including physicians and hospitals. On the other hand, a rival bill backed by the American Hospital Association would stress the creation of Health Care Corporations, comparable to HMO's and give hospitals the upper hand in their direction.

There are many other trends I have not mentioned—increased use of automation, computers, data processing in information storage, in medical diagnosis and screening, increased gravitation toward the hospital as the nucleus of the health care system, the union movement, areawide and regional facility planning and certification of need.

As all these trends develop, the doctor has a serious responsibility to evaluate, educate and work for passage of laws, rules and regulations of most proven worth to ensure that the changes effected are those which are most likely to overcome or lessen those inadequacies which are actual, important, and improvable.

It is the individual physician's responsibility, but his potential for effective action is limited. It is even more the responsibility of organized medicine, and effective action by organized medicine demands the participation of every individual physician. Together we can do more.



## EDITORIALS



### Due-Care

**U**TILIZATION review has now become an accepted fact of life by the medical profession. Accepted, that is, to the extent that, like income tax, it is the law!

Most physicians have at least heard of PSRO; some even have a pretty fair understanding of what it is all about, even though there have been no regulations or guidelines issued and very little definitive information emanating from Washington.

There are few physicians indeed, however, who seem to understand the full significance of PSRO and the other sections of the Social Security Amendments of 1972, P.L. 92-603. In the opinion of this writer, this law will have a greater impact on the way medicine is practiced in this country than any piece of legislation within memory.

It is to one of the other sections of P.L. 92-603 that these comments address themselves. There is a portion of that law which is now being referred to as the "due-care" provision.

Historically, under the Medicare law, when it became necessary to deny a claim under Part A because the beneficiary received "non-covered" services, the provider (hospital, skilled nursing facility or home health agency) could look to the patient for payment of the cost of the services. Now this has been changed!

P.L. 92-603 states that, unless the beneficiary can reasonably have been expected to know that the services he received were "non-covered" under the law, he shall be "held harmless."

The new law further states that the provider shall be held liable for the amount of the claim unless the provider has given evidence that it exercises "due-care" in determining that the services provided Medicare beneficiaries

are medically reasonable and necessary and covered under the regulations and guidelines.

What is the criterion for exercising "due-care"? Although the specific regulations have not yet been issued, it apparently will be simply this: the provider must give evidence of its ability and willingness to conduct effective utilization review!

By gaining the status of a "due-care provider", the facility will be assured that the vast majority of the claims it submits will be paid routinely and that it will be "held harmless" in the event a claim must be denied. Conversely, if the provider is unable to gain this status, all claims will be subjected to review and the facility will be unable to collect payment from Medicare or from the beneficiary when a claim is denied.

It is quite evident that the burden of all of this falls directly upon the medical staff. It is no longer sufficient for a utilization review committee to "go through the motions", or to do the minimum that can be gotten by with. Members of the UR committee must be objective but fair, tough and thoroughly conversant with the rules, regulations and guidelines under which the Medicare program must be administered.

It is not difficult to appreciate the vital interest Hospital Boards and Administrators will have in the effective performance of the UR committee. The work of that committee, perhaps more than that of any other committee of the staff, will have significant bearing on the financial stability of the hospital. In the interest of his patients, as well as himself, the physician should share that concern.

HBA



## Erythema Nodosum

**I**N this issue of *The Journal* Doctor Stumbo presents a case of erythema nodosum related to oral contraceptives<sup>1</sup>.

This entity, which has been around a long time, still appears sporadically but now seems to be related more to sarcoidosis and drug usage, such as the birth control pills and sulfonamides. Formerly tuberculosis and streptococcal infection were the prime causes. However, it should be noted that most series list one-fourth to one-half of cases as having no obvious etiology which can be discerned.

For practical purposes it is always best to regard erythema nodosum as a hypersensitivity secondary to another entity. Among the causes are the following additional disorders: primary atypical pneumonia, leprosy, pertussis, gonorrhea, lymphogranuloma venereum, measles, cat scratch disease, histoplasmosis, coccidioidomy-

cosis, trichophytosis, chronic ulcerative colitis, syphilis, and reactions to iodides, sulfonamides, bromides, salicylic acid, arsphenamine and phenacetin<sup>2</sup>.

Since many of the etiologies are infectious diseases, these obviously should be ruled out as more severe, persistent cases always bring up the question of steroid therapy. However, many cases can be managed with bed rest and salicylates alone with spontaneous resolution.

CHARLES C. SMITH, JR., M.D.

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1. Stumbo, Warren G.: *Erythema nodosum secondary to the use of oral contraceptives*, *Journal of KMA* 71: 1973.

2. Wheeler, Clayton E. Jr.: *Erythemas*, *Cecil-Loeb Textbook of Medicine*, W. B. Saunders Co., Philadelphia, 1971.

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### AMA Judicial Council Opinion: Use of Physician's Name in Commercial Advertising

From time to time in the past, physicians have permitted the use of their names in commercial advertisements. It was not a widespread, frequent or accepted practice.

At this time the Council sees definite evidence of a break with ethical tradition. Commercial advertisements carrying the name, photograph and professional appointments of physicians are conspicuous in both public and professional periodicals.

Regardless of disclaimers and alleged educational claims for the ad, the intent of using a physician's name and photograph in an advertisement is simply to draw attention to the ad. The physician who permits his name and photograph to be so used is permitting himself and his profession to be exploited.

The Judicial Council has previously stated that it is demeaning to the medical profession for the physician to permit the use of his name and professional status in the promotion of commercial enterprises. Out of respect for his profession, a physician should not allow his name or the prestige of his professional status as a physician to be used in the promotion of commercial enterprises.

To the extent that the facts of a particular case indicate that the honor and dignity of the profession

are denigrated then charges of conduct contrary to Section 4 of the Principles of Medical Ethics should be brought before and fully reviewed by the ethics committee of the physician's component medical society.

Circumstances will suggest and facts disclose whether some consideration of value was given the physician for the use of his name and photograph by the advertiser. Circumstances will indicate the purpose of the advertisement.

In view of the proliferation of advertising of this nature, the Judicial Council reaffirms its opinion:

It is demeaning to the medical profession for a physician to permit the use of his name and professional status in the promotion of commercial enterprises. A physician may freely engage in business ventures outside the practice of medicine. However, out of respect for his profession, he should not allow his name or the prestige of his professional status as a physician to be used in the promotion of commercial enterprises.

In conclusion, the Council condemns as unethical, the action of the physician who is **found** to place personal, selfish, financial or venal interests ahead of the high ideals of the medical profession. The Council wishes to call this reaffirmation of its opinion to the attention of all physicians and to all ethical medical publications.

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\*Adopted by the AMA Judicial Council, April 28, 1973.



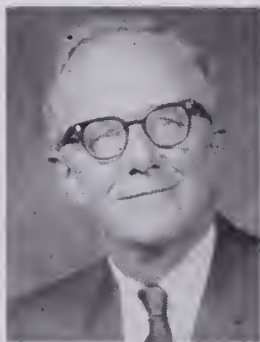
## ORGANIZATION SECTION



### Out-of-State Guest Speakers to Participate on Scientific Program With Kentucky Physicians at KMA Annual Meeting, Sept. 18-20

Participating with Kentucky physicians in the scientific program of the 1973 KMA Annual Meeting will be well-known medical authorities from across the nation. The four general sessions will highlight this year's meeting, which will take place September 18-20 at the Ramada Inn/Bluegrass Convention Center in Louisville.

Panel discussions and scientific presentations will revolve around the themes of Critical Care Medicine, Pollution, Renal Problems and Sex and Its Consequences. Four participants dealing with the latter theme on the Thursday morning program will be Robert C. Long, M.D., Louisville; James W. Curran, M.D., Memphis; Paul J. Fink, M.D., Norfolk, Va., and Reynold J. M. Gold, M.B.Chir., Montreal.



Doctor Long



Doctor Curran

In addition to the scientific program, the annual session will include the meetings of 16 specialty groups, two sessions of the KMA House of Delegates, the annual convention of the Woman's Auxiliary to KMA, an Orientation Program for new members, more than 75 scientific and technical exhibits, University of Louisville Alumni Reunions and the annual KEMPAC Seminar.

Doctor Long, active in the affairs of organized medicine, has served as KMA Delegate to the AMA, AMA Trustee and is now Chairman of the KMA Committee on Health Care of the Poor. Speaking September 20 on the subject "Common Sexual Problems and Their Management," Doctor Long is Chairman of the Division of Human Sexuality and Associate Professor in the Department of Obstetrics and Gynecology at the University of Louisville School of Medicine.

Speaking on "Diagnosis of Gonorrhea in the Female" is Doctor Curran, Research Instructor and Medical Director of the Gonorrhea Complications Study, Department of Preventive Medicine at the



Doctor Fink



Doctor Gold

University of Tennessee. Doctor Curran is also Clinical Research Investigator for the Venereal Disease Branch of the Center for Disease Control in Atlanta. A 1970 graduate of the University of Michigan, he is a member of the American Venereal Disease Association.

Doctor Fink, Chairman of the Department of Psychiatry and Behavioral Sciences at Eastern Virginia Medical School, will be speaking on "Sex Counseling." A guest of the Kentucky Academy of Family Physicians, Doctor Fink is also Medical Director of the Norfolk Community Mental Health Center. A member of numerous psychiatric associations, Doctor Fink serves on the editorial board of *Annals of Adolescent Psychiatry*.

A native of England, Doctor Gold will handle the topic "Sex-Linked Genetic Disorders" on the Thursday morning program. Assistant Professor of Human Genetics at McGill University in Montreal, Doctor Gold is also a lecturer in Pediatrics at McGill. A Fellow of the U.S. National Genetics Foundation, he has written a great deal on genetic screening.

This year's scientific program has been fully accredited by the American Medical Association for postgraduate continuing medical education. Closed circuit color television broadcasts of all scientific programs will be provided to each room at the Ramada Inn from 5 p.m. to 1 a.m. This service is provided by AMA.

Harold L. Bushey, M.D., Barbourville, KMA Trustee from the 15th District, was presented the "Outstanding Citizen Award" during the annual Knox County Chamber of Commerce dinner on May 18. Specializing in internal medicine, Doctor Bushey is a member of the Cumberland Valley Comprehensive Health Planning Council.



## 1973 Scientific Program Outline Released for Annual Meeting

The following preliminary scientific program for the 1973 KMA Annual Meeting has been released by Lee C. Hess, M.D., Florence, KMA President. The program will be presented at the Bluegrass Convention Center in Louisville.

Each half-day session of the three-day program will feature a 30-minute intermission in order that physicians may visit the scientific and technical exhibits.

### TUESDAY, SEPTEMBER 18

#### Morning Session

THEME: "Critical Care Medicine"

Opening Ceremonies

"Battered Child Syndrome"—Ray E. Helfer, M.D., East Lansing, Mich.

"Laboratory Utilization Patterns in Critical Care Medicine"—Hubert J. Van Peenen, M.D., Houston, Tex.

"Critical Care Medicine—Its Evolution and Present Status"—Don M. Benson, M.D., Pittsburgh, Pa.

"Technical Approach to the Acute Abdomen"—Roscoe E. Miller, M.D., Indianapolis, Ind.

#### Afternoon Session

Nine of the 16 participating specialty groups will meet simultaneously at 2:00 p.m. No general scientific session will be held at that time.

### WEDNESDAY, SEPTEMBER 19

#### Morning Session

THEME: "Pollution"

"Noise Pollution—Cause and Effect"—Walter H. Maloney, M.D., Cleveland, Ohio

"Pollution of the Oral Environment"—Kenneth D. Snawder, D.M.D., Louisville

"The Impact on Changing Pesticide Usage on the Medical Community"—Anne R. Yobs, M.D., Chamblee, Ga.

"Air Pollution in Relation to Morbidity and Mortality"—Bertram W. Carnow, M.D., Chicago, Ill.

"Pollution and Contamination—Some Effects on the Skin"—James L. Pipkin, M.D., San Antonio, Tex.

#### Afternoon Session

THEME: "Renal Problems"

"Dialysis"—Eli Friedman, M.D., Brooklyn, N.Y.

"Operable Cancer of the Prostate"—Lester Persky, M.D., Cleveland, Ohio

"Bladder Cancer of Industrial Etiology"—Lloyd B. Tepper, M.D., Rockville, Md.

"On the Pathogenesis of Uremia"—Neal S. Bricker, M.D., Bronx, N.Y.

### THURSDAY, SEPTEMBER 20

#### Morning Session

THEME: "Sex and Its Consequences"

"Determinants of Sexual Behavior"—Charles W. Lloyd, M.D., Hershey, Pa.

"Common Sexual Problems and Their Management"—Robert C. Long, M.D., Louisville

"Diagnosis of Gonorrhea in the Female"—James W. Curran, M.D., Memphis, Tenn.

"Sex Counseling"—Paul J. Fink, M.D., Norfolk, Va.

"Sex-Linked Genetic Disorders"—Reynold J. M. Gold, M.B.Chir., Montreal, Quebec

#### Afternoon Session

The remaining seven specialty groups will meet at 2:00 p.m. There is no general session scheduled for the afternoon.

## U.S.P. Director to Speak At President's Luncheon

This year's President's Luncheon will feature Robert H. Henry, Director of Professional Affairs of the United States Pharmacopoeial Convention, Inc., as guest speaker. The Luncheon, to be held in Belle Hall at the Bluegrass Convention Center, Wednesday, September 19 at 11:50 a.m., will also include the installation of the new KMA President and award presentations.



Mr. Henry

Henry, whose topic for the Luncheon address is "The U.S.P. — Give It to the Elephants," joined the U.S.P. in March, 1971. His responsibility includes coordinating the work of the U.S.P. with pharmacy and medicine, Boards of Pharmacy, regulatory agencies, medical and pharmacy schools and governmental agencies.

Entertaining, as well as informative, Henry has spoken to medical and pharmacy groups across the nation. He effectively uses humor to take a hard look at some of the towering problems that face the medical professions.

Lee C. Hess, M.D., Florence, KMA President, urges all members and their wives to attend the President's Luncheon and hear this interesting speaker.

## Digest of Proceedings, Board of Trustees May 16, 1973

The fourth session of the Kentucky Medical Association Board of Trustees was held on May 16, 1973, at the Headquarters Building in Louisville. The Board appointed an ad hoc committee to study the Supreme Court abortion decision as it relates to current KMA policy and unanimously reaffirmed

support of the Mediredit legislation with new additions that have been made to the original Mediredit bill.

Following this, the KMA Board of Trustees held a joint meeting with the Board of Directors of the Kentucky Foundation for Medical Care. The main discussion of this meeting centered around adoption of a policy statement with regard to Professional Standards Review Organization (PSRO) area designations and structures. David A. Hull, M.D., President of the Foundation, explained to all members and guests representing various health agencies that it was the intention of the Foundation to ask that Kentucky be made a single PSRO area. In attendance also were official representatives of allied organizations, third party carriers and governmental medical programs.

Following a lengthy discussion on all of the problems involved, the group agreed that it would be best for Kentucky to have only one PSRO area.

It was announced that the next regularly scheduled meeting of the KMA Board of Trustees would be held in August.

### **Group Travel Accident Policy Purchased By KMA**

On June 1, 1973, KMA purchased a group travel accident policy for KMA Officers, KMA Trustees, KMA Alternate Trustees, AMA Delegates and Alternate Delegates, KMA Delegates, KMA committee members and KMA staff members, which provides coverage when traveling on Association business. The policy is with the Lumbermens Mutual Casualty Company and covers 457 KMA members and 20 staff members up to age 70.

The policy was purchased after the KMA Business Management and Services Committee, at the request of the KMA Executive Committee, reviewed plans in effect for several other state medical associations and received both oral and written proposals from a number of competitive companies.

The plan with Lumbermens Mutual was obtained at an approximate cost of one dollar per year per person covered. It provides for an individual coverage for accidental death and dismemberment of \$50,000 with an aggregate limitation of liability of \$300,000. The Association is to maintain a list of covered individuals providing the insurance company annually with the correct number of individuals covered.

### **Correctional Facilities Council Appointed by Governor**

Governor Wendell H. Ford has named four physicians and two dentists to two-year terms on the Advisory Council on Medical and Dental Facilities for Kentucky's correctional institutions.

Carl Cooper, M.D., Bedford; William Keller, M.D., Louisville, Delmas Clardy, M.D., Hopkinsville, and William Moses, M.D., Louisville, were physician appointments to this newly established council. Dentists named to serve were Ballard Jolly, D.M.D., Cadiz and Karl Lange, D.M.D., Lexington.



Paul J. Sides, M.D., Lancaster, Chairman of the KAFP Awards Committee (right), presents the "Citizen Doctor of the Year" Award to Roy G. Wilson, M.D., Campbells-ville (left). The award presentation was made during the recent annual meeting of the Kentucky Academy of Family Physicians held May 9-12 in Louisville. Robert M. Blake, M.D., Maysville, was named President-Elect and John W. Ambach, M.D., Louisville, assumed the Presidency.

### **U.L. Newborn Symposium To Be Held Nov. 8-9**

The Seventh Annual Newborn Symposium, sponsored by the Department of Pediatrics of the University of Louisville School of Medicine, will be held November 8-9 at the School's Health Sciences Center Auditorium.

Participants for the two-day event which will deal with the management and outcome of congenital defects will be William Edwards, M.D., Edwin Fischer, M.D., Melvin Grumbach, M.D., J. Alex Haller, M.D., C. Charlton Mabry, M.D., Judson Randolph, M.D. and Leonard Reisman, M.D. Members of the U of L Department of Pediatrics will participate in the program.

Doctor Grumbach will deliver the 1973 Ninth Annual Louisville Pediatric Lecture on November 7. For further information write: Billy F. Andrews, M.D., 226 East Chestnut Street, Louisville, Kentucky 40202.

### **Primary Aldosteronism**

*(Continued from Page 448)*

hypertension. Recognizing that the rare patient with normokalemic primary aldosteronism may not be detected, from a practical point of view the single most important screening procedure is the measurement of plasma potassium concentration at a time when the patient is consuming a high sodium intake and not on diuretic therapy. The finding of hypokalemia in this setting merits complete evaluation for primary aldosteronism.

THEODORE A. KOTCHEN, M.D.



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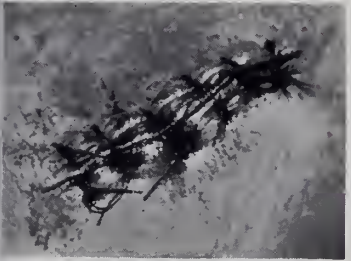
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**"Antacid" action**—Pro-Banthine® (propantheline bromide) reduces gastric secretory volume and resting total and free acid.

**"Sustained" action**—Pro-Banthine P.A.® (propantheline bromide) contains 30 mg. of the drug in the form of sustained-release or timed-release beads; on ingestion about half of the drug is released within an hour and the remainder continuously as earlier increments are metabolized.

High-level anticholinergic activity is maintained all day and all night in most patients with only two tablets every eight hours.

**"Analgesic" action**—Pro-Banthine helps to control the acid-spasm-pain complex.

A "diagnostic tool"—Pro-Banthine may be used parenterally to immobilize the duodenum for more revealing roentgenographic appraisal through hypotonic duodenography.

Pro-Banthine is considered adjunctive in total peptic ulcer therapy that may include diet, conventional antacids, bed rest, and other supportive measures.

**Vigorous anticholinergic action** — Pro-Banthine® Vials, 30 mg., are for intramuscular or intravenous use when prompt and vigorous anticholinergic action is required.

**Mild anticholinergic action**—Pro-Banthine® Half Strength, 7.5-mg. tablets, for more exact adjustment of maintenance dosage in mild to moderate gastrointestinal disorders.

**Indications:** Pro-Banthine is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

**Contraindications:** Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflux esophagitis, or unstable cardiovascular adjustment in acute hemorrhage.

**Warnings:** Patients with severe cardiac disease should be given this medication with caution.

Fever and possibly heat stroke may occur due to anhidrosis. In theory a curare-like action may occur, with loss of voluntary muscle control. For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted.

Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthine.

**Precautions:** Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

**Adverse Reactions:** Varying degrees of drying of salivary secretions may occur as well as mydriasis and blurred vision. In addition the following adverse reactions have been reported: nervousness, drowsiness, dizziness, insomnia, headache, loss of the sense of taste, nausea, vomiting, constipation, impotence and allergic dermatitis.

**Dosage and Administration:** The recommended daily dosage for adult oral therapy is one 15-mg. tablet with meals and two at bedtime. Subsequent adjustment to the patient's requirements and tolerance must be made.

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The contraindications and precautions applicable to Pro-Banthine 15 mg. should be observed.

**How Supplied:** Pro-Banthine is supplied as tablets of 15 and 7.5 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg.

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Before prescribing, see complete prescribing information in SK&F literature or *PDR*.

**\*Indications:** Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

**Contraindications:** Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

**Warnings:** Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia ( $> 5.4$  mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides

are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

**Precautions:** Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with anti-hypertensive agents may result in an additive hypotensive effect.

**Adverse Reactions:** Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.


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**Indications:** Stable adult diabetes mellitus; sulfonylurea failures, primary and secondary; adjunct to insulin therapy of unstable diabetes mellitus.

**Contraindications:** Diabetes mellitus that can be regulated by diet alone; juvenile diabetes mellitus that is uncomplicated and well regulated on insulin; acute complications of diabetes mellitus (metabolic acidosis, coma, infection, gangrene); during or immediately after surgery where insulin is indispensable; severe hepatic disease; renal disease with uremia; cardiovascular collapse (shock); after disease states associated with hypoxemia.

**Warnings:** Use during pregnancy is to be avoided.

**Precautions:** 1. **Starvation Ketosis:** This must be differentiated from "insulin lack" ketosis and is characterized by ketonuria which, in spite of rel-

atively normal blood and urine sugar, may result from excessive phenformin therapy, excessive insulin reduction, or insufficient carbohydrate intake. Adjust insulin dosage, lower phenformin dosage, or supply carbohydrates to alleviate this state. **Do not give insulin without first checking blood and urine sugar.**

2. **Lactic Acidosis:** This drug is not recommended in the presence of azotemia or in any clinical situation that predisposes to sustained hypotension that could lead to lactic acidosis. To differentiate lactic acidosis from ketoacidosis, periodic determinations of ketones in the blood and urine should be made in diabetics previously stabilized on phenformin, or phenformin and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH, and the lactate-pyruvate ratio. The drug should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis.

3. **Hypoglycemia:** Although hypoglycemic reactions are rare when phenformin is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with phenformin.

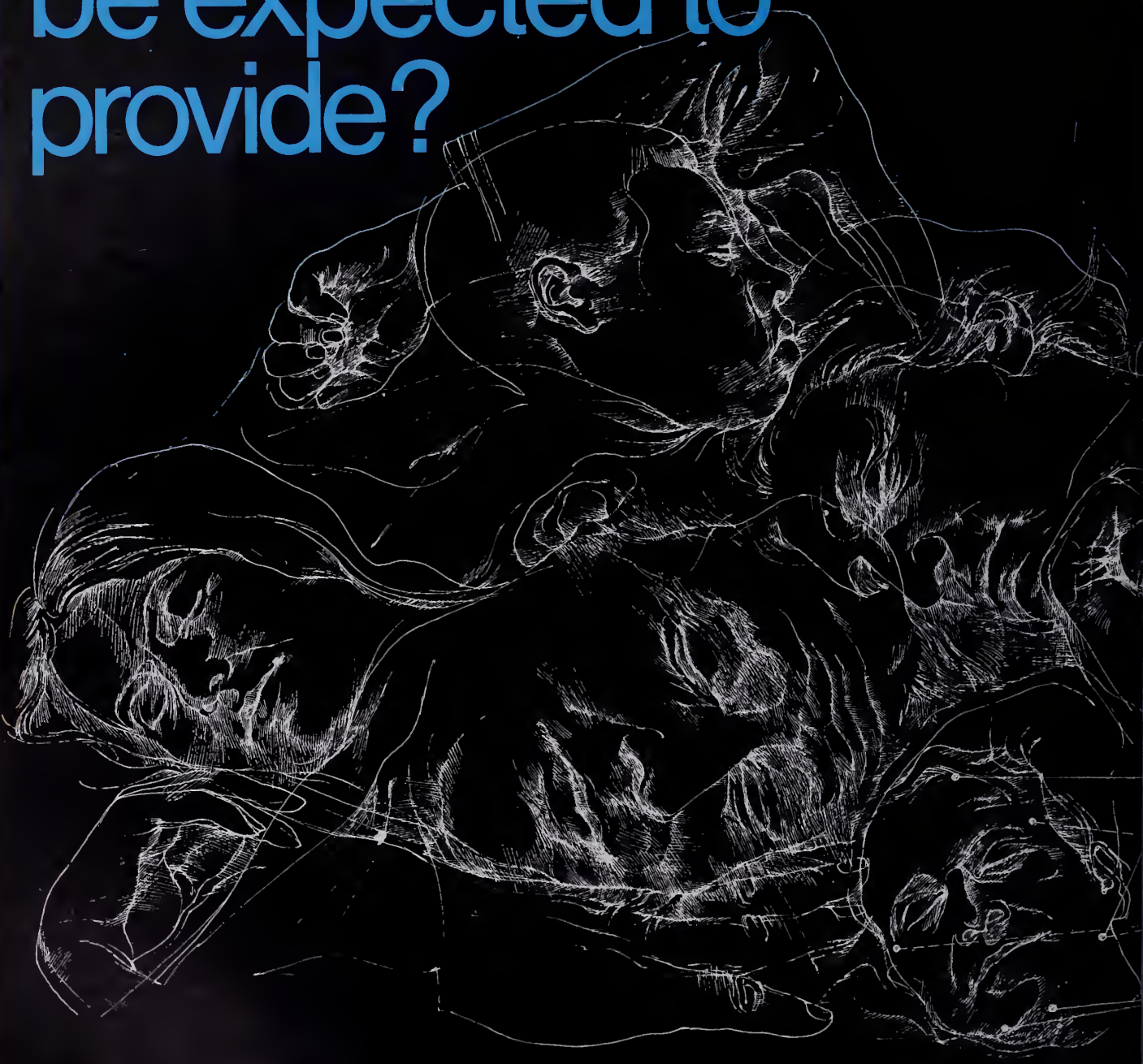
**Adverse Reactions:** Principally gastrointestinal; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, the drug should be immediately withdrawn. Although rare, urticaria has been reported, as have gastrointestinal symptoms such as anorexia, nausea and vomiting following excessive alcohol intake. (B) 98-146-103-E (6/72)

*For complete details, including dosage, please see full prescribing information.*

GEIGY Pharmaceuticals  
Division of CIBA-GEIGY Corporation  
Ardley, New York 10502



# What should a medication for sleep be expected to provide?



**Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:**

**Indications:** Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or

recommended.

**Contraindications:** Known hypersensitivity to flurazepam HCl.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years

of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

**Precautions:** In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effect. Employ usual precautions in patients who are severely depressed, or with



## Sleep for 7 to 8 hours without need to repeat dosage during the night

No sleep medication has been as rigorously evaluated in the sleep research laboratory as Dalmane. Insomnia patients given one 30-mg capsule of Dalmane at bedtime, on average: fell asleep within 17 minutes, had fewer nighttime awakenings, spent less time awake after sleep onset, and slept for 7 to 8 hours with no need to repeat dosage during the night.

## Sleep with consistency

Dalmane has been shown to be consistently effective even during consecutive nights of administration. Thus there is little likelihood for the need to increase dosage to maintain therapeutic effect.

Dalmane (flurazepam HCl) is a distinctive sleep medication—a benzodiazepine specifically indicated for insomnia. It is not a barbiturate or methaqualone, nor is it related chemically to any other available hypnotic.

## Sleep with relative safety

Chronic tolerance studies have confirmed the relative safety of Dalmane; no depression of cardiac or respiratory function was noted in patients administered recommended or higher doses for as long as 90 consecutive nights. Dalmane is generally well tolerated and morning "hang-over" is relatively infrequent. Dizziness, drowsiness, lightheadedness and the like have been the side effects noted most frequently, particularly in elderly and debilitated patients. (An initial dose of Dalmane 15 mg should be prescribed for these patients.)

# DALMANE®

(flurazepam HCl)

## When restful sleep is indicated

One 30-mg capsule *h.s.*—usual adult dosage  
(15 mg may suffice in some patients).

One 15-mg capsule *h.s.*—initial dosage for elderly or debilitated patients.

ROCHE

ROCHE LABORATORIES  
Division of Hoffmann-La Roche Inc.  
Nutley, New Jersey 07110

nt depression or suicidal tendencies.  
odic blood counts and liver and kid-  
function tests are advised during  
ated therapy. Observe usual precau-  
s in presence of impaired renal or  
atic function.

erse Reactions: Dizziness, drowsi-  
s, lightheadedness, staggering, ataxia  
falling have occurred, particularly  
derly or debilitated patients. Severe  
tion, lethargy, disorientation and  
a, probably indicative of drug intoler-  
e or overdosage, have been reported.

Also reported were headache, heart-  
burn, upset stomach, nausea, vomiting,  
diarrhea, constipation, GI pain, nervous-  
ness, talkativeness, apprehension, irri-  
tability, weakness, palpitations, chest  
pains, body and joint pains and GU com-  
plaints. There have also been rare occur-  
rences of sweating, flushes, difficulty in  
focusing, blurred vision, burning eyes,  
faintness, hypotension, shortness of  
breath, pruritus, skin rash, dry mouth,  
bitter taste, excessive salivation, anorexia,  
euphoria, depression, slurred speech,

confusion, restlessness, hallucinations,  
and elevated SGOT, SGPT, total and direct  
bilirubins and alkaline phosphatase.  
Paradoxical reactions, *e.g.*, excitement,  
stimulation and hyperactivity, have also  
been reported in rare instances.

Dosage: Individualize for maximum bene-  
ficial effect. *Adults*: 30 mg usual dosage;  
15 mg may suffice in some patients.

*Elderly or debilitated patients*: 15 mg  
initially until response is determined.

Supplied: Capsules containing 15 mg or  
30 mg flurazepam HCl.

# Opinion & Dialogue

## "Prescription drugs – who should determine the maker?"

### Dispenser of Medicine

Clifton J. Latiolais  
President  
American  
Pharmaceutical  
Association



### Maker of Medicine

C. Joseph Stetler  
President  
Pharmaceutical  
Manufacturers  
Association



"Too many doctors are indifferent to the economic consequences of their decisions." So stated a recent issue of *Medical News Report* (December 4, 1972), an independent weekly newsletter published by former AMA Chief Executive F. J. L. Blasingame, M.D.

#### Doctor, are you indifferent...?

In discussing an anticipated increase in Blue Shield rates, Dr. Blasingame's newsletter had this to say:

"In general, it can be said, MD's have given the impression they are not particularly concerned with the increase in cost of health care to their patients...

"True, an MD's training is primarily scientific, but in the real world of practice, all of his scientific decisions have a price tag, or an economic impact. The economics of health care beckon the practitioner's attention. Concern for economics of medicine

When the pharmacist recommends that a drug product other than the one ordered be dispensed, the prescriber invariably permits the change when he feels the best interests of the patient will be served.

#### Shortcomings of Pro-Substitution Argument

The fact remains that it is necessary for the prescriber to know that the change is being contemplated, and to be in a position to consent or demur. Without that opportunity, the unilateral decision of the pharmacist, made in the absence of clinical knowledge of the patient, could expose him to needless risks, and in addition, jeopardize the relationship between the professions of Pharmacy and Medicine. In my view, there is nothing in the pro-substitution argument that offsets these risks.

#### The Issue of Drug Knowledge

Substitution advocates claim that the primary justification for changing the rules is the desire to better utilize pharmacists' knowledge about drugs. Yet the pharmacist's task to keep current on the entire field of drug therapy, to some degree, puts him at a disadvantage. Most often, a practicing physician will need expert knowledge of no more than 25



should be an obligation of medical practice...

"Medical societies ought to conduct continuing campaigns to point out the substantial savings that could be realized thru deductible insurance and protection for catastrophic illness. At the very least, they should, in the patients' interest, question the tactics of any insurance organization that raises health care costs by forcing policyholders to buy insurance they may not need or want and probably won't ever use.

"Too many doctors are indifferent to the economic consequences of their decisions. Too many, for example, habitually hospitalize patients for the convenience of the MD. It's nonsense to deny such habits exist...

"Doctors, thru their medical societies, have unhesitatingly appealed to their patients for support in the fight against government interference with the private practice of medicine. And the public in the past has responded. It's time the American Medical Association and state and local medical societies paid off the debt by decisive action to hold down the cost of medical care."

#### **Cost of Drugs**

Insurance rates and hospital charges are only two factors in health

care costs. The cost of drugs—both prescription and nonprescription—is another.

And when it comes to drug costs, the nation's pharmacists are concerned. Through their national professional society, the American Pharmaceutical Association, pharmacists are advising the public to use nonprescription medication cautiously and conservatively, and to seek the advice of their pharmacist before selecting or purchasing such drugs.

#### **Outdated Laws**

The pharmacist also is aware that when it comes to prescription drugs, often he has an even greater opportunity to reduce the cost to the patient—with no sacrifice in the quality of the medication dispensed. But in many states, outdated and antiquated laws prevent the pharmacist from engaging in drug product selection. "Drug product selection" simply means that the pharmacist functions in the patient's interest by consciously choosing, from the multiple brands available, a low-cost quality brand of the specific drug to be dispensed in response to the physician's prescription order.

Much *misinformation* has been purposely spread by those who stand to gain financially by maintaining

high drug costs to the public. An endless stream of propaganda has emanated from the drug industry in an effort to persuade the medical profession that these so-called anti-substitution laws should be retained. And as long as these laws are retained, the drug industry will continue its current marketing practices which contribute unnecessarily to high drug costs to patients. These practices also are inviting government agencies to expand their restrictive controls on physicians and pharmacists.

#### **APhA Efforts**

As pharmacists, we are concerned about health care costs. We hope that every physician shares our concern on this vital issue, and will give his personal support to the constructive efforts APhA has undertaken in the interest of all patients.

*(For a complete discussion of drug product selection, you are invited to request a free copy of the "White Paper on the Pharmacist's Role in Product Selection" from: American Pharmaceutical Association, 2215 Constitution Avenue, N.W., Washington, D.C. 20037.)*

or 30 drugs that he selects to treat the majority of conditions encountered in his practice. Moreover, the physician's choice of a specific brand is based on his knowledge of the patient's medical history and current condition, and his experiences with the particular manufacturer's product.

Some substitution proponents have argued that the dispensing of a prescription is a simple two-party transaction between the pharmacist and the patient, and that a substituting pharmacist may avoid even a technical breach of contract by simply notifying the patient that he is making the substitution. I would judge that few courts would be sympathetic toward a pharmacist who substituted without physician approval and who undertook a legal defense that seeks to make the patient responsible for the pharmacist's actions.

#### **Reduced Prescription Prices?**

Substitution advocates are suggesting to the consumer, and particularly the consumer activist, that reduced prescription prices could follow legalization of substitution. We have seen absolutely no evidence to justify this claim. To the contrary, experience in Alberta, Canada, where substitution is authorized, suggests

the opposite.

Many pharmacists understandably are concerned about the cost of maintaining multiple stocks of similar products. While there is no doubt that inventory costs rise when additional brands are stocked, it would be interesting to know how much they rise, and how many pharmacists actually stock all brands—of, say, ampicillin or tetracycline—or how long they keep "slow moving" products on their shelves before they are returned for credit. To ask that the industry eliminate multiple sources is to ask competitors to stop competing.

#### **Drug Substitution—A License for the Unethical**

Anti-substitution repeal would favor "corner cutting" pharmacists and manufacturers. For them, free substitution would be not a right, but a license. As an aftermath, it is quite likely that the confidence of both physicians and patients in the profession of Pharmacy would be eroded, as revelations about the unconscionable behavior of an undisciplined few were magnified in the press or in professional circles.

#### **Summary**

In short, what the American Pharmaceutical Association advo-

cates as a broad-spectrum panacea looks to us to be not only a minority view (advocacy of substitution is by no means a uniform policy in Pharmacy), but also an extraordinarily costly and ineffective remedy, whose side effects are odious. We believe (1) that an impressive majority of pharmacists prefer to work with Medicine and with industry, for the consumer, and for the general good, (2) that they seek the privilege to substitute when the patient might gain and when the patient's doctor agrees, and (3) that they seek to work for the resolution of genuine grievances openly and professionally.

*(For amplification of PMA views, please write for our booklet, "The Medications Physicians Prescribe: Who Shall Determine the Source?" It is available from: Pharmaceutical Manufacturers Association, 1155 Fifteenth Street, N.W., Washington, D.C. 20005.)*

Pharmaceutical  
Manufacturers Association  
1155 Fifteenth Street, N.W.  
Washington, D.C. 20005

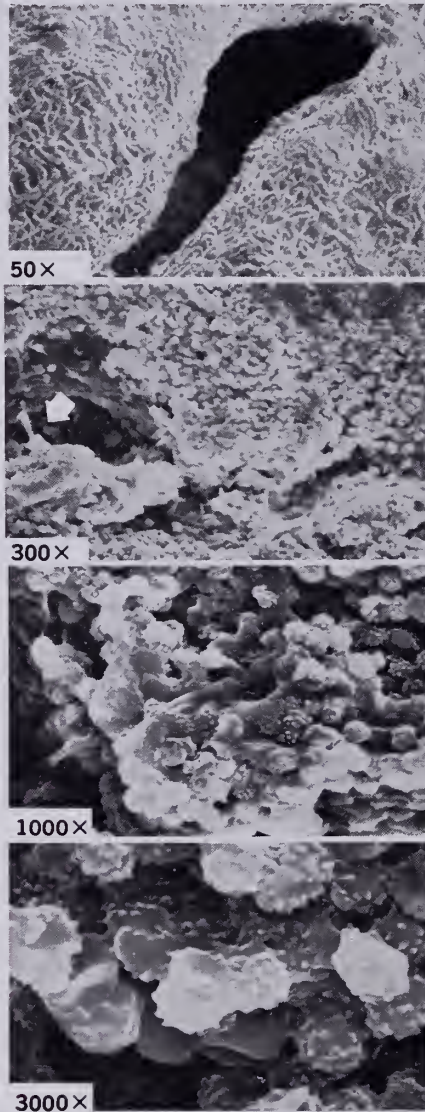


# Progress in

## Diagnosis

In these illustrations of tissue from a patient with acute cystitis, you can see the swollen and inflamed mucosa of the ureteral orifice (50X), a fibrin strand (300X), and a whitish exudate composed of polymorphonuclear leukocytes (1000X and 3000X). The photographs were taken with the scanning electron microscope (SEM) by Dr. Shirley Siew, Associate Professor of Pathology at the University of Pittsburgh School of Medicine. They come from the clinical exhibit "Scanning Electron Microscopy of Urinary Tract Infection," which won first prize in Clinical Research at the May 1972 meeting of the American Urological Association.

The scanning electron microscope promises to be extremely useful in its investigation of human pathology. In time, examination of tissue with the SEM is likely to play a significant role in the diagnosis of urinary tract infection.



### A note on the photography:

These photographs were made by the scanning electron microscope, which, like the transmission electron microscope, operates on the basic principle of exposure of tissue to a beam of electrons in a vacuum. With the SEM, electrons bombard the surface of tissue which has been given a fine coating of gold. The electrons reflect off the tissue onto a television screen, and the resulting photograph shows a three-dimensional effect. The tissue sections need to be ultrathin, so there is a minimum of handling and distortion.

Just as much an instrument of progress and just as helpful in its way has been Gantrisin (sulfisoxazole) Roche, developed and introduced a generation ago. However, there's been no generation gap in its continuing usefulness. In fact Gantrisin, with so many years of clinical experience behind it, is still one of the most valuable drugs we have for the treatment of non-obstructed cystitis, pyelitis or pyelonephritis due to susceptible organisms such as *E. coli*. Specifically, Gantrisin provides your patient with certain important therapeutic advantages:

**References:** 1. Bran, J. L.; Karl, D. M., and Kaye, D.: *Clin. Pharmacol. Ther.*, 12:525, 1971. 2. Burke, E. C., and Stickler, G. B.: *Mayo Clin. Proc.*, 44:318, 1969. 3. Hibbard, L. T., in Bulger, M. J., et al.: *Patient Care*, 1:(3) 47, 1967. 4. Holloway, W. J.; Furlong, J. H., and Scott, E. G.: *J. Urol.*, 102:249, 1969. 5. House, T. E., et al.: *Obstet. Gynecol.*, 34:670, 1969. 6. Lampe, W. T.: *J. Am. Geriatr. Soc.*, 16:798, 1968. 7. Moffat, N. A., and Wenzel, F. J.: *Curr. Ther. Res.*, 13:286, 1971. 8. Normand, I. C. S.: *Practitioner*, 204:91, 1970. 9. Pryles, C. V.: *Med. Clin. North Am.*, 54:1077, 1970. 10. Seneca, H.; Peer, P., and Warren, B.: *J. Urol.*, 99:337, 1968. 11. Trafton, H. M., and Lind, H. E.: *J. Urol.*, 101:392, 1969. 12. Cohen, M.: *Pediatrics*, 50:271, 1972.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Nonobstructed urinary tract infections (mainly cystitis, pyelitis, pyelonephritis) due to susceptible organisms.

**IMPORTANT NOTE:** *In vitro* sensitivity tests not always reliable; must be coordinated with bacteriological and clinical response. Add aminobenzoic acid to follow-up culture media. Increasing frequency of resistant organisms limits usefulness of antibacterial agents, especially in chronic and recurrent urinary infections. Maximum safe total sulfonamide blood level, 20 mg/100 ml;

measure levels as variations may occur.

**Contraindications:** Hypersensitivity to sulfonamides; infants less than 2 months of age; pregnancy at term and during the nursing period.

**Warnings:** Safety in pregnancy not established. Do not use for Group A beta-hemolytic streptococcal infections, as sequelae (rheumatic fever, glomerulonephritis) are not prevented. Deaths reported with hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias. Sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. Contraindicated in patients with liver disease and urinalysis with careful microscopic

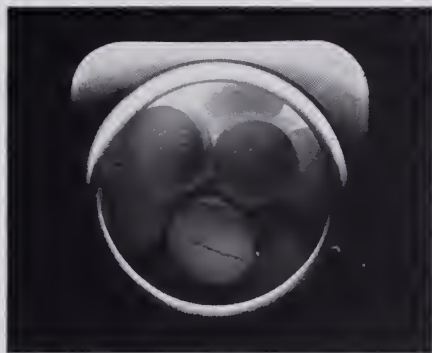


# Acute cystitis:

## Treatment

**High urinary levels** As a urinary anti-infective, Gantrisin (sulfisoxazole) offers your patients important advantages. Therapeutic urinary and plasma concentrations are usually reached in from 2 to 3 hours and can be maintained on the recommended 8 Gm/day dosage schedule that's convenient for almost all patients.

**Generally good tolerance** Gantrisin causes relatively few undesirable reactions, and serious toxic reactions are rare. Minor reactions are comparatively infrequent, but may include nausea, headache and vomiting. Hence, Gantrisin may usually be given even for extended periods when treating chronic or recurrent nonobstructed cystitis, pyelitis or pyelonephritis due to *E. coli* and other susceptible organisms. (See Important Note in summary of product



information.) Complete blood counts and urinalyses, with careful microscopic examination, should be performed frequently.

**High solubility** Gantrisin (sulfisoxazole) Roche is one of the most soluble of all sulfonamides, with both free and acetylated forms highly soluble in the commonly encountered urinary pH range of 5.5 to 6.5. Urine levels have been detected in

60 minutes; therapeutic levels are usually reached in from 2 to 3 hours. About 90% of a single dose is excreted in 24 to 48 hours. As with all sulfonamides, adequate fluid intake must be maintained.

**economy** Average cost of therapy is still only about 6½¢ per tablet.

**total therapy: 14 days** Recent evidence in the medical literature suggests that therapy in acute non-obstructed urinary tract infections should be continued for 10 to 14 days even if patients become asymptomatic in 2 or 3 days, as they often do.<sup>1-11</sup> However, one investigator, evaluating a 5-year study of sulfisoxazole used to treat urinary tract infection in 368 girls, found no advantage in continuing therapy more than two weeks *for a first infection*.<sup>12</sup>

**For acute, chronic or recurrent nonobstructed cystitis, pyelitis, or pyelonephritis due to susceptible organisms...**

begin with  
**Gantrisin<sup>®</sup>**  
**sulfisoxazole/Roche<sup>®</sup>**

**Usual adult dosage:** 4 to 8 tablets *stat*  
2 to 4 tablets *q.i.d.*

mination should be performed frequently.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, with allergy or bronchial asthma. Hemolysis, frequently dose-related, may occur in glucose-6-phosphate dehydrogenase-deficient patients. Maintain adequate fluid intake to prevent crystalluria and stone formation.

**Adverse Reactions:** *Blood dyscrasias:* granulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and hemoglobinemia; *Allergic reactions:* exanthema multiforme (Stevens-Johnson

syndrome), generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis; *Gastrointestinal reactions:* Nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis; *C.N.S. reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia; *Miscellaneous reactions:* Drug fever, chills and toxic nephrosis with oliguria and anuria. Periarthritis nodosa and L.E. phenomenon have occurred. Due

to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

**Supplied:** Tablets containing 0.5 Gm sulfisoxazole.



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110

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# Continuing Educational Opportunities

From The

## KMA Postgraduate Medical Education Office

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### IN KENTUCKY

#### JULY

- 12-13 Regional Seminar, Kentucky Academy of Family Physicians, Lake Barkley State Park, Cadiz

#### SEPTEMBER

- 18-20 KMA ANNUAL MEETING, Ramada Inn/Bluegrass Convention Center, Louisville  
21-22 Postgraduate seminar\*, "Nephrology for the Practicing Physician," University of Kentucky Medical Center, Lexington. Registration fee: \$40. Seven hours of AAFP credit.

#### OCTOBER

- 1-3 Scientific program\*, "Changing Concepts and Methods in the Practice of Cardiology," University of Kentucky Medical Center, Lexington, sponsored by U.K. College of Medicine and Indiana University School of Medicine. Registration fee: \$100 (for members of the American College of Cardiology) \$125 (for non-members).  
7-13 Family Medicine Review Program\*, University of Kentucky Medical Center, Lexington. Registration fee: \$185. AAFP credit has been requested for 54 hours.

#### NOVEMBER

- 7 Ninth Annual Louisville Pediatric Lecture, by Melvin Grumbach, M.D., University of Louisville School of Medicine, Health Sciences Center Auditorium, Louisville  
8-9 Newborn Symposium, "Congenital Defects — Management and Outcome", Department of Pediatrics, University of Louisville School of Medicine, Health Sciences Center Auditorium, Louisville

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\*For further information contact: Ronald D. Hamilton, M.D., Director, Continuing Education, College of Medicine, University of Kentucky, Lexington, Kentucky 40506.

### IN SURROUNDING STATES

#### SEPTEMBER

- 17-18 AMA Annual Congress on Occupational Health, Benjamin Franklin Hotel, Philadelphia

#### OCTOBER

- 1-2 Tennessee Valley Medical Assembly, Read House, Chattanooga  
26-27 Postgraduate course, "Otolaryngology for the Family Practitioner," University of Miami School of Medicine, Miami. Contact: Bruce W. Weissman, M.D.

#### NOVEMBER

- 14-17 Seminar on "Life-Saving Measures for the Critically Injured," sponsored by the American College of Surgeons and the University of Tennessee College of Medicine, Shrier Auditorium, Memphis

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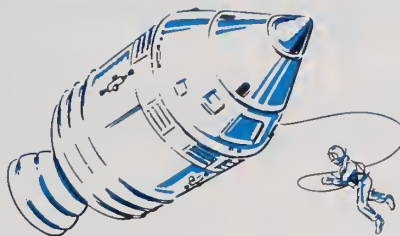
### ACP Announces Two Ky. Fellows

The American College of Physicians has announced that two Lexington physicians have been made Fellows of the society which represents specialists in internal medicine and related fields. **Ronald D. Hamilton, M.D.** and **Wilk O. West, M.D.** were recently selected along with 315 other physicians in the United States and Canada.

### Office Available

Office of established physician in Lexington, Kentucky, will be available August 1. Situated in Good Samaritan Hospital neighborhood. Will rent furnished or unfurnished. Office is air-conditioned. For further information, call (606) 233-1942, except Wednesdays or Saturdays.





Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . a prophylaxis to prevent kidney or bladder calculi.

# Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, 300 mg.; SODIUM ACID PHOSPHATE, 500 mg.

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages

complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

## Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.



WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

*Manufacturers of Ethical Pharmaceuticals*

# IN ASTHMA IN EMPHYSEMA



*optional  
therapy*



# THE mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE** tablets contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2** tablets contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications** are listed above. **MUDRANE GG** tablets contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2** tablets contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with  $\frac{1}{2}$  to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

## **MUDRANE—original formula**

*First choice*

## **MUDRANE-2**

*When ephedrine is too exciting  
or is contraindicated*

## **MUDRANE GG**

*During pregnancy or when K.I. is  
contraindicated or not tolerated*

## **MUDRANE GG-2**

*A counterpart for Mudrane-2*

## **MUDRANE GG ELIXIR**

*For pediatric use  
or where liquids are preferred*

*Clinical specimens  
available to physicians.*

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*Manufacturers of Ethical Pharmaceuticals*





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NEW ALBANY	Professional Arts Bldg., 1919 State Street
BOWLING GREEN	524 East Main Street
OWENSBORO	Doctors Bldg., 1001 Center Street



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# Now form follows function

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highly effective therapy for all  
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**CANDEPTIN® (candicidin) VAGELETTES™**  
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#### **Virtually unlimited application**

CANDEPTIN VAGELETTES Vaginal Capsules provide  
the specific high potency antimicrobial agent,  
candicidin, in a soft gelatin capsule—the shape  
designed with your patient in mind. It permits easy  
manual insertion without the need for an applicator  
or inserter... of particular value for the pregnant  
patient... for *intravaginal use*. By cutting off the tip of  
the narrow soft end, the contents can be extruded  
through an intact hymen for *intravaginal use*. And  
it is readily adaptable to *topical application* for  
labial involvement, and/or *intravaginal use* to treat  
mucosal infection.

#### **CANDEPTIN (candicidin) provides:**

##### **Rapid results**

Prompt, symptomatic relief—itching, burning,  
and discharge subside in 48-72 hours.<sup>1</sup>

Soothing, miscible ointment permits complete  
contact with affected tissue.

Usually cures in a single 14-day course of therapy.<sup>2,3,4</sup>

##### **Safe**

Exact dosage assured.<sup>2,3</sup>

No side effects, clinical reports of irritation or  
sensitization extremely rare.

##### **Convenience**

Easy to use intravaginally and/or topically  
for labial involvement.

Encourages patient acceptance and cooperation.  
Therapy is easy to start in your office.

##### **Clinical proof of potency**

CANDEPTIN (candicidin) is significantly more potent  
*in vitro* than nystatin.<sup>5</sup> CANDEPTIN Vaginal Ointment  
and Tablets have a clinical record of cure rates  
of 90% and more in pregnant and non-pregnant  
patients.<sup>1,4,6</sup> In recent studies on CANDEPTIN  
VAGELETTES Vaginal Capsules, involving both gravid  
and non-gravid patients, a 100% culture-confirmed  
cure rate was achieved with a single 14-day  
course of therapy.<sup>2,3</sup>

##### **Unique**

**CANDEPTIN® (candicidin)**  
**VAGELETTES™ Vaginal Capsules**



**Description:** CANDEPTIN (candidin) Vaginal Ointment contains a dispersion of candidin powder equivalent to 0.6 mg. per gm. or 0.06% Candidin activity in U.S.P. petrolatum. 3 mg. of Candidin is contained in 5 gm. of ointment or one applicatorful. CANDEPTIN Vaginal Tablets contain Candidin powder equivalent to 3 mg. (0.3%) Candidin activity dispersed in starch, lactose and magnesium stearate. CANDEPTIN VAGELETES Vaginal Capsules contain 3 mg. of Candidin activity dispersed in 5 gm. U.S.P. petrolatum.

**Action:** CANDEPTIN Vaginal Ointment, Vaginal Tablets, and VAGELETES Vaginal Capsules possess anti-moist activity.

**Indications:** Vaginitis due to *Candida albicans* and other *Candida* species.

**Contraindications:** Contraindicated for patients known to be sensitive to any of its components. During pregnancy manual Tablet or VAGELETES Capsule insertion may be preferred since the use of the ointment applicator or tablet inserter may be contraindicated.

**Caution:** During treatment it is recommended that the patient refrain from sexual intercourse or the husband wear a condom to avoid re-infection.

**Adverse Reaction:** Clinical reports of sensitization or temporary irritation with CANDEPTIN Vaginal Ointment, Vaginal Tablets or VAGELETES Vaginal Capsules have been extremely rare.

**Dosage:** One vaginal applicatorful of CANDEPTIN Ointment or one Vaginal Tablet or one VAGELETES Vaginal Capsule is inserted high in the vagina twice a day, in the morning and at bedtime, for 14 days. Treatment may be repeated if symptoms persist or reappear.

**Available Dosage Forms:** CANDEPTIN Vaginal Ointment is supplied in 75 gm. tubes with applicator (14-day regimen requires 2 tubes). CANDEPTIN Vaginal Tablets are packaged in boxes of 28, in foil with inserter—enough for a full course of treatment. CANDEPTIN VAGELETES Vaginal Capsules are packaged in boxes of 14 (14-day regimen requires 2 boxes.)

Store under refrigeration to insure full potency.

Federal law prohibits dispensing without prescription.

**References:** 1. Olsen, J.R.: *Journal-Lancet* 85:287 (July) 1965. 2. Giorlando, S.W.: *Ob/Gyn Dig.* 13:32 (Sept.) 1971. 3. Decker, A.: Case Reports on File, Medical Department, Julius Schmid. 4. Giorlando, S.W., Torres, J.F., and Muscillo, G.: *Am. J. Obst. & Gynec.* 90: 370 (Oct. 1) 1964. 5. Lechevalier, H.: *Antibiotics Annual 1959-1960*. New York, Antibiotica Inc., 1960. pp. 614-618. 6. Friedel, H.J.: *Maryland M.J.*, 15:36 (Feb.) 1966.



Julius Schmid Pharmaceuticals  
423 West 55th Street  
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**CANDEPTIN<sup>®</sup>**  
(candidin)

**Vaginal Tablets**

**Vaginal Ointment**

**and VAGELETES<sup>™</sup>**  
**Vaginal Capsules**

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# What's on your patient's face...

may be more important than  
his chief complaint



The lesions on his face may be solar/actinic — so-called “senile” keratoses...and they may be premalignant.

## Solar, actinic or senile keratoses

These lesions may be called by several names, but they usually can be identified by the following characteristics: the typical lesion is flat or slightly elevated, of a brownish or reddish color, papular, dry, rough, adherent, and sharply defined. They commonly occur as multiple lesions, chiefly on the exposed portions of the skin.



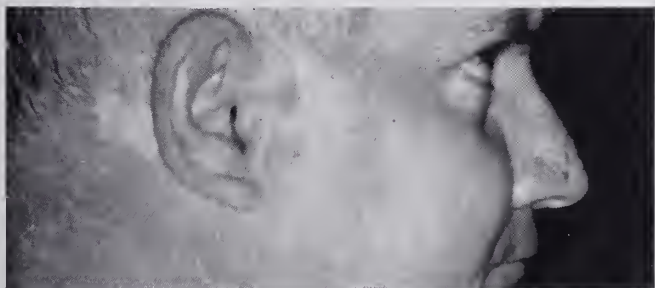
*Patient P.T.\* seen on 3/29/67 shows typical lesions of moderately severe keratoses. Note residual scarring on ridge of nose from previous cryosurgical and electro-surgical procedures.*

## Sequence of therapy/ selectivity of response

After several days of therapy with Efudex® (fluorouracil), erythema may begin to appear in the area of the lesions; the reaction usually reaches its height of unsightliness and discomfort within two weeks, declining after discontinuation of therapy. This reaction occurs in affected areas. Since the response is so predictable, lesions that do not respond should be biopsied.

## Acceptable results

Treatment with Efudex provides highly favorable cosmetic results. Incidence of scarring is low. This is particularly important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.



*Patient P.T.\* seen on 6/12/67, seven weeks after discontinuation of 5%-FU cream. Reaction has subsided. Residual scarring not seen except for that due to prior surgery. Inflammation has cleared and face is clear of keratotic lesions.*

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Multiple actinic or solar keratoses.

**Contraindications:** Patients with known hypersensitivity to any of its components.

**Warnings:** If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

**Precautions:** If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

**Adverse Reactions:** Local — pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported — insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

**Dosage and Administration:** Apply sufficient quantity to cover lesion twice daily with non-metal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

**How Supplied:** Solution, 10-ml drop dispensers — containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes — containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

This patient's lesions  
were resolved with

# Efudex® (fluorouracil)

5% cream/solution

...a Roche exclusive



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110

\*Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

# How strong must a tranquilizer be for severe anxiety?

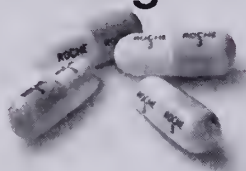
## As strong as Librium® 25 mg (chlordiazepoxide HCl)



The achievement of desired therapeutic results is often a function of the dosage strength as well as the drug's intrinsic action. Thus, when anxiety is *severe*, the 25-mg strength of Librium frequently provides the necessary antianxiety action with a minimum of unwanted adverse reactions. Librium 25 mg is a convenient dosage form for the relief of severe, incapacitating anxiety, specifically formulated to supplement your counsel and reassurance.

### Benefits-to-risks ratio permits higher dosage

For over 13 years, Librium has been recognized for its excellent benefits-to-risks ratio, an asset in the *higher* dosage ranges as in more common clinical applications. Thus, the frequency of dosage with Librium 25 mg can be flexibly adjusted to the needs and response of the individual patient, up to 100 mg daily if required. Total daily dosage for the elderly and debilitated should not exceed 20 mg. When severe anxiety has been reduced, Librium dosage should be correspondingly reduced or discontinued entirely.



basic support  
in severe anxiety  
**Librium® 25 mg**  
(chlordiazepoxide HCl)  
1 capsule t.i.d./q.i.d.



Roche Laboratories  
Division of Hoffmann-La Roche Inc  
Nutley, N.J. 07110

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Relief of anxiety and tension occurring alone or accompanying various disease states.

**Contraindications:** Patients with known hypersensitivity to the drug.

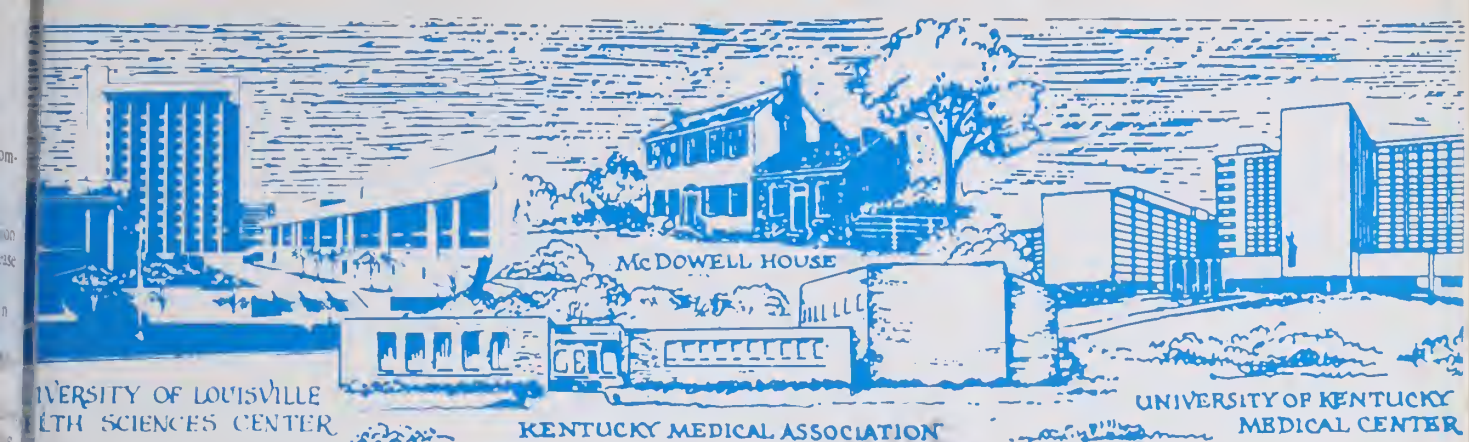
**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

**Adverse Reactions:** Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

**Supplied:** Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.





*The Journal of The*  
**KENTUCKY**  
*Medical Association*

**Management of Soft Tissue Injuries of the Face  
to Reduce Scar Formation**

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**A Mechanism for Improving Immunization  
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Everybody experiences psychic tension.



Most people can handle this tension.



Some people develop excessive psychic tension and need your counseling,



and a few may need counseling  
*and* the psychotropic action of Valium® (diazepam).



Before deciding to make Valium (diazepam) part of your treatment plan, check on whether or not the patient is presently taking drugs and, if so, what his response has been. Along with the medical and social history, this information can help you determine initial dosage, the possibility of side effects and the ultimate prospects of success or failure.

While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

**Dosage:** Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

**Supplied:** Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose® packages of 1000.



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110

# Valium® (diazepam)

To help you manage excessive psychic tension

# The Rx that says "Relax"

**BUTISOL Sodium** provides highly predictable sedative effect: minor dosage adjustments are usually all that's needed to produce the desired degree of sedation. (With 3 dosage forms and 4 strengths to make adjustments easy.)

**BUTISOL Sodium** offers prompt, smooth, relatively non-cumulative action: begins to work within 30 minutes...yet, because of its intermediate rate of metabolism, generally has neither a "roller-coaster" nor a "hangover" effect.

**BUTISOL Sodium** is remarkably well tolerated: a 30-year safety record assures you that there is little likelihood of unexpected reactions.

**BUTISOL Sodium** saves your patients money: costs less than half as much as most commonly prescribed sedative tranquilizers.\*

These are four good reasons for prescribing BUTISOL Sodium for the many patients who need to have the pace set just a little slower. Its gentle daytime sedative action is often all that's needed to help the usually well-adjusted patient cope with temporary stress.

\*Based on surveys of average daily prescription costs.



**Butisol** SODIUM  
(SODIUM BUTABARBITAL)

**Contraindications:** Porphyria, sensitivity to barbiturates, or susceptibility to dependence on sedative-hypnotics. **Warning:** May be habit forming. **Precautions:** Exercise caution in: moderate to severe hepatic disease; withdrawal in drug dependence or the taking of excessive doses over a long period, to avoid withdrawal symptoms; elderly or debilitated patients, to avoid possible marked excitement or depression; use with alcohol or other CNS depressants because of combined effects. **Adverse Reactions:** Drowsiness at daytime sedative dose levels, skin rashes, "hangover" and gastrointestinal disturbances are seldom seen. **Usual Adult Dosage:** For daytime sedation, 15 mg. to 30 mg. t.i.d. or q.i.d. For hypnosis, 50 mg. to 100 mg. **Available as:** Tablets, 15 mg., 30 mg., 50 mg., 100 mg.; Elixir, 30 mg. per 5 cc. (alcohol 7%). BUTICAPS® [Capsules BUTISOL SODIUM (sodium butabarbital)] 15 mg., 30 mg., 50 mg., 100 mg.

**McNEIL**

McNeil Laboratories, Inc., Fort Washington, Pa. 19034



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# MESSAGE FROM THE PRESIDENT

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**A**LTHOUGH the "Watergate affair" has captured most everyone's attention in recent months, the KMA leadership and that of the Foundation for Medical Care have been trying to stay abreast of several issues which are of extreme significance to the members of the Kentucky Medical Association.

PSRO may sound like a nasty word to many people, but it is the law of the land and we are going to have to learn to live with it. Dave Hull and the Foundation Board have done a great job in drawing up a proposed Professional Standards Review Organization for Kentucky using the statewide "umbrella" concept. They have also developed guidelines or suggested norms for quality care by Kentucky physicians for use in PSRO. It seems to me at the grass root level that very few people know much about PSRO, and yet one of the elder spokesmen of medicine recently said at a Washington meeting on PSRO that this legislation would probably change the practice of medicine more than anything in the past century.

The recent Supreme Court decision relative to abortion has necessitated a great deal of effort by an ad hoc committee to try to ascertain what KMA policy changes this decision would require, and what professional guidelines should be drawn up to protect the women of this State and the physicians. This committee will also have to formulate medicine's influence on any legislation concerning the abortion issue which will be presented at the next General Assembly.

The third very significant issue is the one relating to continuing medical education, i.e., whether it should be compulsory, or voluntary and whether it should be related to re-licensing.

These issues and many other important decisions will have to be made by your delegates, at the upcoming KMA Annual Meeting. Let us hope that each county society has discussed these and other important issues so that their delegates will be informed and capable of making decisions which will shape the very future of the practice of medicine in the state of Kentucky, when they cast their vote in September.

ROBERT N. MCLEOD, JR., M.D.  
CHAIRMAN, KMA BOARD OF TRUSTEES

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*This is the fourth in a series of articles written at the request of KMA President, Lee C. Hess, M.D.*

# *The Kentucky Foundation for Medical Care*

## Physician's Continuing Education

**C**ONTINUING Medical Education is a topic of current and immediate concern.

Professional Standards Review Organization requirements imply it, the AMA encourages it, most physicians want it, and it is demanded by some state laws.

Some have questioned the wisdom of a self-imposed formal continuing education program claiming that the implication of mandatory compliance with educational requirements and the insinuation of competency evaluation would constitute an undue restriction on the practice of medicine and would be unrealistic.

As much as possible, I think all physicians try to "keep up" by attending those meetings and courses, listening to those tapes, and reading those journals and articles that are felt to be most beneficial to their individual needs. But can educational attainment be truly judged without some comparison? Wouldn't each person's practice be upgraded if he worked toward a standard developed by the peers in his specialty? And while each physician demands of himself that he achieve personal goals he has set, shouldn't the practice of the profession and

his patients make the same demands?

The determination of competence is not measurable by educational requirements. Meeting educational standards only measures outward compliance with a continuous educational program. Only physician peers, or perhaps specialty certifying boards can determine competence. Continuing education can, however, provide an atmosphere that encourages competence.

In a survey conducted last year, most all physicians responding indicated that they favored a regular program of continuing education but cited several valid reasons for not acquiring postgraduate training. This year, our Medical Education Committee has devoted most of its efforts to planning for a state-wide CME program which would meet educational needs and be easily available. Although there are many questions that must be yet resolved, it is gratifying that we are seeking to satisfy our own needs rather than having those needs dictated by external forces.

DAVID A. HULL, M.D.  
PRESIDENT



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## *From the files of the* **COMMITTEE FOR THE STUDY OF MATERNAL MORTALITY**

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This 27-year-old married, white, Gravida II, Para I, was under the care of a private physician. Her EDC was February 17. She had an uncomplicated prenatal course having gained approximately 18 pounds. Her first baby weighed over 8 lbs. She was told that she was possibly pre-diabetic. Labor began spontaneously about 8 a.m. on February 9th. She was admitted to the hospital at 1 p.m. on that date. The cervix was 3 to 4 cm dilated, membranes were thought to have ruptured prior to admission. On examination she was leaking fluid. Temperature was normal, blood pressure 124/80. An infusion was started at 2 p.m., 1000 cc's of D5W with 10 units of oxytocin at 12 drops a minute. At 2:15 she was completely dilated. She required no medication, a saddle block was administered by an anesthesiologist with delivery of an 8 lb. 8 oz. girl from the LOA position, midline episiotomy and low forceps at 3:45 p.m. The block was given at 3:25. The baby cried immediately and was given an Apgar of 9. There was a small laceration of the vagina that was sutured with multiple figure-of-eight sutures and the episiotomy was repaired. The placenta was manually removed intact. The patient left the delivery room in good condition. Estimated blood loss was 350 cc's. Her hemoglobin on day of admission was 12.6 gms with an hematocrit of 37. Her white count was 12,100 with 84 segs and 6 lymphs. Her hemoglobin on February 11 was 11 gms., hematocrit of 33, white count of 12,300, 78 segs and 13 lymphs. A temperature elevation was recorded on the 10th. However, it came to normal without therapy. Temperature was 100 on the 13th. She complained of some aching of the back of the neck and right arm. On discharge February 13, the 4th postoperative day, her temperature was normal.

She had no complaints until February 14 when she ran a fever of 101. Her physician gave her aspirin and fluids and she was told to call if this continued. The rest of the week she experienced some episodes of low grade fever but seemed to feel that this was probably from her stitches. On the morning of February 19, she developed a shaking chill and a high fever and was told to come to the hospital. Temperature recorded in the emergency room was 105° and she was having a shaking chill. Examination on the arrival in the hospital revealed the neck supple and the lungs clear to auscultation and percussion, the abdomen was soft. Liver and spleen were not palpable. Pelvic examination revealed no foul lochia, the episiotomy appeared

normal and the uterus felt normal for this period. There was some slight tenderness in the right pelvis. No masses were palpable. Left pelvis was normal. She had had pain in the right lower quadrant during the past day.

The initial impression was acute pyelitis, endometritis or parametritis and the treatment planned was antibiotics, fluids and close observation. Her hemoglobin on admission was 9.1 grams with a hematocrit of 27. Her W.B.C. was 22,000, 52 Neutrophils, 43 Bands, 1 Lymphocyte, 4 monocytes. The urinalysis 5-10 R.B.C. and 75-100 W.B.C. on the voided specimen.

Intravenous fluids were started and blood was typed and crossmatched. Blood pressure on admission was not charted. A vaginal culture was obtained and she was given 16 million units of Penicillin. Her temperature at 12:15 p.m. was 99.2°; at 2:25 it was 99.8°. At 3:30 it rose to 101° and aspirin was given. Blood was started and around 8:15 p.m. she began having difficulty in breathing. Her physician saw her with a medical consultant at 9:30 p.m. on the night of admission. She seemed dyspneic, her temperature was 105.2° and her blood pressure was 140/70. She was coughing up mucus and had rales in both lungs. It was felt that she could have a septic pulmonary emboli or a staph pneumonia. Chest x-ray was obtained. A diagnosis of congestive heart failure was made. She was given Heparin intravenously and Lasix IV and moved to the intensive care facility.

She was kept on intravenous fluids, 6 million units of Penicillin and 1 gram of Streptomycin. An EKG was obtained. Foley catheter was inserted. The next day her temperature was 99.8°. She was still dyspneic, but seemed improved. Her urinary output was 800+cc of urine and rales were still present over the lung fields. She still complained of soreness in the right lower quadrant. A chest x-ray was obtained again and her admission film was read as patchy infiltration into the lower two-thirds of each lung. The heart and diaphragm appeared to be normal. Probable diagnosis of pneumonia was made. Chest re-examined at bedside on February 20, with the patient in sitting position, revealed extensive infiltration of the lower two-thirds of each lung, appearing about the same as on the preceding film. However, on this film there was obliteration of the right costophrenic angle suggesting fluid. The mediastinal structures were in the midline. The heart size was normal.

She was felt to be much improved the same day. Temperature was 99 and her pulse was 108. Blood pressure was 126/76. Heart rate was 104. The impression was consolidation of left lower lobes with pneumonia. Later the same day, the 20th, her temperature was 99.2 rectally. She still had moist rales in her lungs, however, her breathing was easier and less dyspneic. The abdomen was soft and less tender. The urinary output seemed satisfactory. The patient was thought to be improving, but at 3 a.m. she was more dyspneic, her color became worse. She was restless, confused and found to have increased rales in the left base of the lung. It was felt that tracheostomy was indicated; this was performed under local anesthesia at the bedside. She had a rather large amount of frothy secretions and was placed on a respirator after sedation. Her blood chemistries were obtained, pH 7.475, PO<sub>2</sub> 42, PCO<sub>2</sub> 28. At 12:45 p.m. on February 21 her color seemed better but she was still dusky. The lungs still seemed full and she was breathing on the respirator. The pulse was 86, blood pressure was 120/80, and her temperature was 100 rectally. Her condition seemed stabilized and it was felt that vena caval ligation was indicated. At 3:15 her lungs were more congested and she was slightly cyanotic. Later that day it was felt that the vena cava must be ligated and the anticoagulants instituted thereafter. She was considered a poor risk but there was thought to be no alternative. During the surgery she went into cardiac arrest and cardiac massage was carried out for 30 minutes. She received four pints of blood. Later that day her pH was 7.325, her PO<sub>2</sub> 2 and 25 and PCO<sub>2</sub> was 42.5. Her hemoglobin was 11.1. Her urinary output on February 22 was reduced, the urine was bloody and she was still on inhalation therapy. Her urinary output the next eight hours was 320 cc. Respirations seemed a

little better. She still had, at 11:15 p.m., moderate edema of the chest and a rapid pulse. Clinically, she was thought to be a little less dyspneic. She had 510 cc of bloody urine. On February 23, she seemed worse and was not responding to painful stimuli. On February 27 she had an EEG which was interpreted as showing no electrical activity. The patient continued to do poorly and she expired at 9:20 p.m., February 27, 1971.

### **Diagnosis**

Ovarian vein thrombosis with septic pulmonary emboli following normal vaginal delivery.

### **Comment**

This case was classified by the Committee as a direct obstetrical death with no preventable factors. Treatment was certainly proper and adequate. This rare complication of pregnancy does occur and has been reported at length in the literature. It has been shown that vena caval ligation can be carried out even before delivery. Vena ligation is indicated when recurrent septic pelvic emboli occur. There are many methods used to obstruct vena caval flow. There is complete ligation of the inferior vena cava, the use of vena caval plication, and the use of a so-called umbrella inserted into the inferior vena cava. In the case of septic pelvic thrombosis in which embolization occurs, vena caval ligation is indicated since, if plication or the umbrella is used, septic thrombi will form on the other side of the plication. This unfortunate situation reported in this report seems to be properly treated but the outcome in so many of these cases was as such. These people are indeed acutely ill and the mortality rate can be great.

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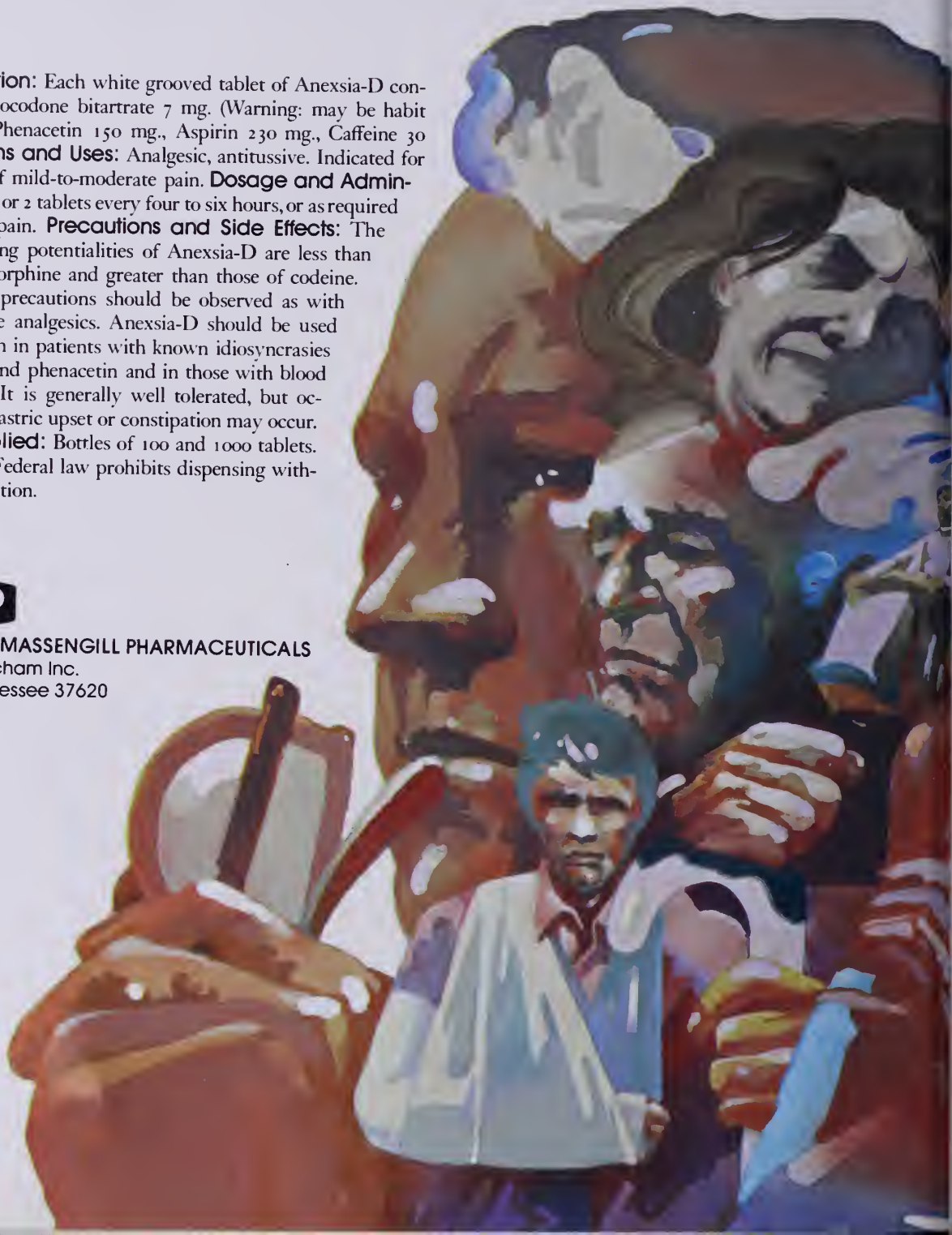
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# DELEGATES' DELIBERATIONS



**T**HE AMA House of Delegates concluded the longest session in its history after reviewing some 168 resolutions and many reports from the Board of Trustees, Council on Medical Education, Council on Medical Service and other committees.

The election for President-Elect was between Ray Holden, M.D., Washington, D.C. and Malcolm C. Todd, M.D., Long Beach, California. Doctor Todd was narrowly elected. He is a practicing general surgeon in Long Beach and has been active as a delegate to the House of Delegates and as President of the California Medical Association. This was a spirited election with most delegates of the opinion that either man would have served the Association well. Doctor Bryce Robinson of Alabama was elected Vice-President and Doctors John Budd, Ohio; Richard Palmer, Virginia; James Sammons, Texas, and Kenneth Sawyer, Colorado, were re-elected to the Board of Trustees. Comedian Bob Hope was presented the 13th Layman's Citation for Distinguished Service.


The main business related to the medical profession's concern with implementation of PSRO. The House reaffirmed its previous pol-

icy of working with the government in an attempt to establish medical societies as the prime movers in implementing the Professional Standards Review Organization law. The House also reaffirmed its policy of increasing physician participation in hospital administrative and board decision-making. A representative of the resident-intern section was placed in categorical automatic membership on the Council on Medical Education and Council on Medical Service. This was considered by Eugene Osgrod, M.D., the delegate from the Section of Interns and Residents, a significant attempt to involve younger physicians in decision-making at a policy level.

Any other reports concerning activities will be reported in *JAMA*. The *American Medical News* of July 2/9, 1973, has an excellent summary. I would be happy, of course, to discuss with you matters of concern related to the AMA. The delegates request your support and membership.

DAVID B. STEVENS, M.D.  
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should be administered with caution to patients with cardiovascular disease; development of chest pains or other aggravations of cardiovascular disease requires a reduction in dosage.

**Contraindications:** Thyrotoxicosis, acute myocardial infarction. **Side effects:** The effects of SYNTHROID (sodium levothyroxine) therapy are usually in being manifested. Side effects, when they occur, are secondary to increased rates of metabolism; sweating, heart palpitations, or without pain, leg cramps, and weight loss. Diarrhea, vomiting, and nervousness have been observed. Myxedematous patients with heart disease have died from abrupt increase in dosage of thyroid drugs. Careful observation of the patient during the beginning of any thyroid therapy will alert the physician to any untoward effects.



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dose may be increased to 0.05 mg. after two weeks and to 0.1 mg. at the end of a second two weeks. The daily dose may be further increased at two-month intervals by 0.1 mg. until the optimum maintenance dose is reached (0.1-1.0 mg. daily).

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# *The* JOURNAL *of the* Kentucky Medical Association

ISSUED MONTHLY UNDER THE DIRECTION OF THE BOARD OF TRUSTEES

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## Management of Soft Tissue Injuries Of the Face to Reduce Scar Formation

TOM D. NICHOL, D.D.S., M.D. AND NORMAN M. COLE, M.D.

*Louisville, Kentucky*

*A detailed technique in the management of facial lacerations, with illustrative cases, is given to show how scarring can be reduced to a minimum.*

**I**NJURIES of the face do not have to be severe in order to produce a scar that is severely disfiguring for the remainder of a patient's life. This is especially true if the injury is inadequately managed initially; for failure to give meticulous care at the time of the initial repair will produce a deformity for all to see. These resultant scars can produce severe maladjustments in the patient's personality, even to the extent of suicide or severe anti-social behavior. Some improvement in scars can be brought about by plastic surgical procedures, such as scar excision, z-plasty, and dermabrasion; but the poor results from a poor initial repair can never be corrected as well as when a meticulous repair is carried out initially.

The primary repair of a facial injury, in order to produce the least scar formation, must be done under the best physical conditions, in an unhurried manner. The factors that encourage a good result include: (1) a thorough diagnosis of the structures injured, (2) a meticulous preparation of the wound, (3) intelligent debridement, (4) skillful repair, and, (5) post-operative care. Let us look at each of these factors more closely.

### Diagnosis of Injury

Structures that are severed in a facial injury cannot be repaired if it is not known that they are injured. This is especially true of facial nerve injuries. Examination for motor weakness in the facial musculature prior to the administration of an anesthetic, either general or local, must be carried out. This is done by having the patient wrinkle his brow, close his eyes and show his teeth. Asymmetry of motion suggests a facial nerve injury. The best results in facial nerve injuries result from an initial meticulous repair of the nerve.

The levator palpebrae muscle must be suspected of injury in cases of laceration of the upper eyelid, and the ends must be searched for, since it tends to retract superiorly. Lacerations of the lacrimal duct and the parotid duct, likewise, must be thought of, diagnosed and repaired! Associated facial fractures must be considered and appropriate x-ray studies made. Double vision and anesthesia of the cheek, as well as failure of the teeth to occlude properly, may be indications of underlying facial fractures.

After complete evaluation of the injury, the repair can be planned. The first step is a gentle, meticulous cleansing of the wound.

### Preparation of the Wound

Traumatic wounds of the face are painful. A wound cannot be properly cleaned with the

patient in pain. Prior to cleansing the wound, the type of anesthesia required, general or local, is decided upon and obtained. While waiting for this, the wound can be kept moist with saline soaked sponges covered with a mild antibacterial agent such as Phisohex.

After the wound is pain free, it can be thoroughly cleansed by gentle washing with a soft sponge, isotonic saline (preferably not water), and a mild cleanser such as Phisohex or Betadine soap. Hydrogen peroxide may be used for its mechanical sudsing action, but it is not recommended due to its cauterization of the tissues. The eyes should be protected from strong cleansing agents, but they can be irrigated with saline.

All foreign material must be removed. This is especially true of fine dirt particles which produce a permanent tattoo if not removed. A brush may occasionally be required along with the saline irrigation in very dirty wounds.

Hemostasis may be required during the cleansing stage, due to clots being dislodged from the ends of vessels. This is best done by grasping **just the bleeding vessel** with mosquito hemostats and cauterizing the end of the vessel with an electrical cautery unit. Fine ties can be used, but these are more time-consuming and leave foreign material in the wound. Larger bleeding vessels should be tied or repaired. Care must be used in grasping blindly with hemostats in order to prevent injury to other structures such as nerves. Drains are almost never required if the wound is properly cleaned and debrided. Occasionally, drains are left in wounds that produce an injury to the body of the parotid gland, in order to drain these secretions, and prevent the formation of a seroma. All facial lacerations should be surgically closed. Wounds can be cleansed, dressed and left open, for several days, before closure is carried out, in cases of critically ill patients or very contaminated wounds.

After the wound has been thoroughly cleansed and irrigated, grossly devitalized tissue may be debrided.

#### Debridement

Removal of excess tissue in the region of the face may produce an obvious defect later, so only badly traumatized, and obviously de-

vitalized tissue is sacrificed. The blood supply in the facial region is so good that tissues that would not survive in other areas of the body do survive on the face. Even completely avulsed segments can often be replaced and be expected to heal satisfactorily!

The key to debridement in facial injuries is to keep the debridement to a minimum and only sacrifice obviously devitalized tissue. The wound is now ready for repair.

#### Technique of Repair

The repair of a facial injury must be done under optimum conditions in order to obtain optimum results. The surgeon must be relaxed and unhurried. The patient must be comfortable and free of pain. There should be good lighting; fine, delicate instruments; sterile drapes, and good assistance. This usually means the repair should be carried out in an operating room, either under sedation and local anesthesia, or under general anesthesia.

Small children are best done under general anesthesia, administered by a competent anesthesiologist. Smaller wounds in adults can be easily managed by sedation with agents like Demerol and Valium along with local anesthesia with Xylocaine containing epinephrine. The local is given in small amounts with a small syringe and needle as nerve blocks, and in addition is infiltrated into the edges of the wound for hemostasis. About 15 minutes should be allowed for the anesthetic and epinephrine to take effect. Even under general anesthesia, a local anesthetic containing epinephrine, is frequently injected into the margins of the wound, in order to produce constriction of the blood vessels. The wound must be dry for proper visualization and repair. Any bleeding points can be stopped by grasping the vessel end with tiny pickups and touching this with an electrical cautery.

The deeper portions of the wound are again inspected to determine the extent of the injury and again a search is made for foreign bodies. Small fragments of foreign material, particularly glass, are frequently found at this time hiding in the deepest corner of the wound.

Surgical repair should be done under sterile conditions, with wide draping of the field so that the entire face can be visualized. Small eye sheets, should not be used for they do not allow



visualization of the entire face for symmetry. The lighting must be good, but not so bright as to tire the surgeon's eyes. A scrub nurse or an assistant should be available to retract and to cut sutures. The instruments should be delicate and comfortable for the surgeon to use. Magnification may sometimes be required for repair of delicate structures such as the facial nerve, the lacrimal apparatus and lacerations of the vermillion border in small children.

Suture material varies with the preference of individual surgeons, but some factors regarding the size and type of suture material should be considered. The finest suture that will hold the tissues together should always be used. The new polyglycolic acid suture (Dexon) handles well, produces little tissue reaction, and is available on a variety of good needles. This suture is used to close the deeper tissue layers as an interrupted suture using 4-0 to 6-0 size. Dexon is also used to close the mucous membranes of the nasal cavity and mouth, for it is soft and non-irritating and dissolves in about two weeks. Small catgut sutures can be used in the deeper layers and in the mucous membranes, but it tends to produce more tissue reaction than Dexon. White Mersilene can be used where closure of the deeper layers is under some tension, since this material is non-absorbable and possesses good strength. 4-0 white Mersilene is frequently used to repair larger muscle and tendon masses in the face.

The skin is usually closed with a fine monofilament nylon such as 6-0 or 7-0. Occasionally fine black silk sutures are used on the eyelids and in the mouth. Heavier black silk sutures are preferred for tongue lacerations to prevent the suture from pulling through this muscular organ. Silk does produce slightly more reaction than nylon and should be removed as soon as possible. Skin sutures are removed in five to seven days following placement.

In general, the deeper, stronger tissues are closed with 4-0 white Mersilene and the more superficial tissues with 5-0 and 6-0 Dexon. All severed muscles, tendons, fascial layers and the periosteum should be reapproximated. The superficial subcutaneous sutures should be placed with the knots inverted, and this closure should approximate the wound edges so that no tension is required of the final skin sutures. Interrupted sutures are preferred in all layers.

To achieve the least scar and the best cosmetic results some general principles should be remembered. "Key" sutures should be placed first, lining up the wound edges at "key" points such as the vermillion border of the lip, the eyebrow, the eyelid margin and the rim of the ala of the nose. After the "key" sutures line up the wound, the remaining tissues can be approximated without fear of getting structures out of alignment.

Beveled or oblique lacerations of the skin tend to heal by forming a ridge so it is frequently best to square off the edges of these wounds by trimming back two to three millimeters on each edge so that it will be a square, butt joint closure. U-shaped flaps should be tacked down tightly and dressed snugly, or sometimes they should be completely excised to prevent a "pin cushion" effect after healing. Multiple areas of small lacerations and abrasions can often be excised in natural skin lines and produce less scarring than by repairing each individual laceration.

Z-plasties, W-plasties, and Hair Bearing Grafts, are not recommended at the time of the initial repair, but may be required later. At the initial repair, the tissues should be put back together exactly as they were prior to the injury and no rearrangements done unless required for wound coverage. This frequently gives a much better result than would be anticipated and thus unnecessary procedures are not required.

#### Postoperative Care

Care of the wound during the postoperative period is very important in order to reduce the amount of scar formation. Swelling should be kept to a minimum by keeping the head elevated, applying snug, bulky, well-adapted dressings, and by the use of cold packs for the first 24 hours after the injury. Enzymes to prevent swelling are of little value and are of much expense. Superficial injuries are frequently not dressed following repair, so that the repair can be frequently inspected, cleansed and kept moist with an antibiotic ointment. If a dressing is used, an antibiotic ointment is used on the suture line and covered by a non-adherent material such as *Adaptic*, to prevent the dressing from pulling on the wound when it is removed.



FIG. 1 Injury to eyelid of four-year-old boy.

The dressing is removed as soon as its effectiveness in compressing and supporting the wound is accomplished. This is frequently within 24 hours. Collodion can be used to support the wound if necessary. Steri-strip tape may also be used if the sutures are removed under seven days, in order to support the closure.

Crusts should be kept to a minimum and removed in order to prevent purulence from forming, which destroys skin edges, producing a considerable deformity. Crusting is reduced by frequent applications of an antibiotic ointment such as Neosporin. Hydrogen peroxide can be used to remove crusts that have already

formed, but its use daily is to be discouraged for it cauterizes the wound edges.

Gentle massage of the healed wound is begun at two to three weeks in order to remove edema and soften the wound. If there is evidence of keloid or hypertrophic scar formation, the area can be injected with a steroid solution using a Dermajet spray gun. Any scar revision is usually postponed until at least one year following the initial injury in order to allow the tissues to heal to their maximum amount.

If the above concepts are followed, the scars resulting from a severe facial injury can be brought to a very surprising minimum. The happiness and gratitude expressed by the patient and their family more than compensates for the extra time and effort.

### Illustrative Cases

Two cases of severe facial injury will be used to illustrate some of the above points.

The first case is that of a four-year-old who was struck in the left eye by the latch of a door, which had been thrown open suddenly. The upper eyelid was almost completely avulsed, as seen in Figure 1. After a complete evaluation, the child was taken to the operating room and under general anesthesia, the wound was examined, cleansed and repaired in a meticulous manner.

The levator palpebrae muscle had been severed from its attachment to the tarsal plate,



FIG. 2 Four-year-old boy after surgery.



FIG. 3 Four-year-old boy after surgery.





FIG. 4 Injury to nose and eyelid of 18-year-old girl.



FIG. 5 Injury to nose and eyelid of 18-year-old girl.

and had retracted superiorly. The muscle was found and repaired with 5-0 Dexon sutures. The palpebral conjunctiva was repaired with 6-0 Dexon, being careful to bury the knots into the substance of the eyelid, in order to prevent the knots from ulcerating the cornea. The skin was repaired with 7-0 nylon interrupted sutures. Figures 2 and 3 show the excellent cosmetic result and the return of levator function so that he could open the eye normally, six months after injury.

Figures 4 and 5 are of an attractive 18-year-old girl who struck her nose against the steering wheel of her car when it was struck by a second car. These photographs show the laceration of the eyelid and nose with division of the nasal cartilages and extension into both nostrils. This patient was cared for under sedation with Demerol and Valium, and local anesthesia. After thorough cleansing, minimal debridement, and careful hemostasis with electrocautery, the wound was carefully repaired in a very meticulous manner. The nasal mucosa was repaired first, using 5-0 Dexon interrupted sutures. These were left untied and long until all sutures were placed, and then the highest suture in the nostril was tied first and then each one tied down until the lowest one just inside the nostril was tied. The deep soft tissues were then approximated using 6-0 Dexon, being careful to align the severed cartilages. No sutures were placed in the cartilage. The skin was repaired with 7-0 nylon,

being careful to align the edges by placing "key" closure sutures first at the rim of the ala of the nose. Neosporin Ointment impregnated gauze was used to pack the nose and no dressing was used, but the suture line was coated with the same ointment several times a day. The sutures were removed from the skin in six days and Figure 6 shows the results at ten months after injury, with nothing being done to the area except for the initial repair.



FIG. 6 Result of surgery after 10 months to 18-year-old girl.

# A Mechanism for Improving Immunization Status in Kentucky†

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*A threefold increase in immunizations occurred in a rubella/rubeola immunization program as the result of a personal letter, from the county health department, mailed to the parents of an "at risk" child.*

**R**UBELLA, though a mild childhood disease, represents a severe problem of teratogenic potential. Rubella is a disease of early childhood, more common in the spring and summer months. By age 20, approximately 80 to 90% of individuals in the United States have serological evidence of immunity to rubella. Rubella epidemics appear to occur every six to nine years and during the last severe epidemic, in 1964, it was estimated that 20,000 to 30,000 infants were born with Congenital Rubella Syndrome.<sup>1</sup>

In 1969, a commercial rubella vaccine was licensed in the United States. There was much discussion about immunization following this licensure. It is felt that the most successful strategy would be to vaccinate susceptible children, who represent the major reservoir of rubella and who in turn could transmit the disease to pregnant women.<sup>2</sup>

This strategy, in turn, represents another problem, the objective of immunization is to obtain a herd immunity which protects not the individual being immunized but the fetus from the teratogenic effect of the virus. With this goal one might expect that a rubella immuniza-

tion program would not win the public acceptance that was achieved with polio programs.

An additional problem is that parents have difficulty distinguishing that rubeola and rubella are different diseases and require different immunizations, prompting the statement "He's already had his measles' shot".

These problems have contributed to a low level of immunization for rubella. This has been particularly true of the preschool, age one to four, population. When the child reaches school age he enters a "captive" population that can easily be immunized, while the preschooler's immunization depends on the mother's knowledge and motivation.

It has been estimated that approximately 40% of preschool children in the United States have received rubella immunization through public vaccination programs. In Kentucky the corresponding figure is 17% and in Bath County, the setting of this study, 15.7% of the preschoolers have received rubella immunization.<sup>3</sup>

Because of the low levels of rubella immunization in Kentucky and the problems of developing successful immunization clinics for preschoolers we undertook this study. Our objectives were twofold: 1) to examine the impact of a personal letter on the decision to have a preschooler immunized and 2) to examine the reasons that children were not taken to an immunization clinic.

## Methods and Materials

**Community Setting:** This study was performed in Bath County, Kentucky in the fall of 1971. Bath County is a rural Appalachian community of 9,235. The major population center and county seat is Owingsville with a population of 1,600. The community is served by a county health department, staffed with a nurse and a clerk. There are three physicians in the community but no hospital. The Bath

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County School System has a school nurse who performs the majority of the school's immunization programs.

Samples were selected by identifying all of the live births in Bath County for 1967-1970. Immunization records at the county health department office were then matched and those children without a record of rubella immunization were designated "at risk". There were 668 live births, 105 or 15.7% of which had been immunized against rubella. This "at risk" group was divided, using a table of random numbers, into a control and experimental group. The parents of the children in the experimental group received a personal letter, with the child's name and all the information concerning the clinic. The control group was exposed to the usual mass media approach to an immunization clinic. All the information indicated that rubella and rubeola were two separate diseases and stressed the consequences of a rubella infection in a pregnant female. The letters and usual mass media also indicated that transportation, if needed, would be provided.

Clinics were arranged for two days, Friday and Saturday, at three separate locations throughout the county. Mass media advertising included: newspaper and radio publicity as well as posters scattered in general stores and post offices around the county.

The antigen preparations were measles and rubella virus vaccine, MSD. The measles vaccine was prepared from the Enders attenuated Edmonstra strain, and the rubella virus was HPV77-DE.<sup>4</sup> The two viruses were mixed before being lyophilized. The vaccine was administered with a jet injection gun supplied by the Kentucky State Health Department.

Following the clinics, another random sample was drawn of those who did not attend the clinic. Sixty-five patients were drawn from the group who received letters about the clinic but did not attend and sixty-five from the group who did not receive letters and did not attend. These two groups were contacted either by phone or personally to assess why they had not attended the clinic.

### Results

The total population at risk was 513 children, ages one to four. The experimental group

who received letters contained 265 children and the remaining 248 were designated "controls". Originally there was supposed to be an equal number in each group; however, children considered to be in the control group at first were switched to the experimental group when it was found that they had a brother or sister who had received a letter.

One hundred and fifteen children were immunized during the two-day clinic. Of these, 89 were ages one to four and represented the target group and the remainder represented 26 school age children age five to twelve. The preschool children immunized represented 17.3% of the total "at risk" population.

Of the total 89 preschool children immunized, 63 or 71% were brought to the clinic as the result of the letter and 26 or 29% were brought as the result of other methods of reaching the population.

Another method of examining this difference follows: Sixty-three or 24% of those in the experimental group (those who received letters) had their child immunized at the clinic, whereas only 26 or 10.5% of the control group had their child immunized. This two-fold difference is statistically significant with  $X^2 = 11.32$ .  $P < 0.01$ .

Table 1 illustrates the distribution of sources of information concerning the immunization clinic.

Of the 130 children selected for follow-up to determine why they had not attended the clinic, 19 could not be located—four from the control group and 15 from the experimental group. There were 50 children in the received letter/no attend group and 61 in the no letter/no attend group. Each of these families were asked why they did not attend the clinic, and if they had heard about it via the mass

Table 1

Responses of Parents Who Brought  
Their Children in to be Immunized  
What persuaded you to bring your child to the clinic?

	No.	%
Letter Sent to My Home	63	71.1
Newspaper Article	6	6.7
A Poster Advertising Clinics	14	15.7
Radio	1	.9
Other Means	5	5.6
TOTAL	89	100.0

media. Those who claimed that they didn't know about the clinic were asked if they would have attended had they known about it. Table 2 illustrates the distribution of responses to these questions.

Of the group that did not receive a letter, 26 or 42.6% reported they they did not know about the clinic. Of these 26, 22 or 84% indicated that they would have taken the child to the clinic had they known about it.

Also of interest is that 24 or 39.0% of the no letter group and 20 or 40.0% of the group that received a letter felt that their child had already been immunized. This claim was not verified by the investigators.

Table 2

Parent's Reason for Not Bringing Child to be Immunized

No Letter Group (Mass Media Alone)	No.	%
(1) Didn't know about clinics	26	42.6
(2) Thought child already immunized	24	39.3
(3) Child was sick	4	6.6
(4) No transportation	3	4.9
(5) Apathy (interviewer's term)	2	3.3
(6) Thought rubella/rubeola were same, and child had already had rubeola	1	1.6
(7) Mother in Hospital	1	1.6
TOTAL	61	99.9
Letter Received Group (Plus Mass Media)		
(1) Thought child already immunized	20	40.0
(2) Child was sick	12	24.0
(3) Forgot about clinics	6	12.0
(4) Didn't understand letter	4	8.0
(5) Rather have them from family M.D.	4	8.0
(6) No Transportation	2	4.0
(7) Apathy (Interviewer's terms)	2	4.0
TOTAL	50	100.0

### Discussion

Currently the state health department has a mailing form keyed to the birth certificate that reminds the mother of a new infant that it is important to have the child immunized and suggests she see her physician or contact the local health department. This effort has yielded little success in raising the immunization status of the preschool population. Our data indicates that a personal letter with a specific time and place for the clinic, as well as having a "personal" tone can increase the attendance at immunization clinics by twofold over the "mass media" approach to clinic notification. The problem of lack of knowledge of the clinic

is even more obvious when our data on the patients who did not attend the clinic and who did not receive a letter is examined. Of the 61 families surveyed, 26 or 43% were not aware of the clinic and of that group 22 or 84% indicated they would attend a clinic if they knew about it. Of course there is no way to confirm this willingness to participate in a clinic.

The second problem we encountered has been illustrated previously, that is, that the family thought the child had been immunized. This illustrates two problems: 1) that parents don't know the difference between rubella and rubeola and 2) that immunizations performed in the private physician's office frequently do not get reported to the county health department.

The first problem is largely being obviated by the combined rubella/rubeola vaccine, but the second problem still remains.

We feel that a more active immunization surveillance program must be undertaken by the county health department in order to assure that immunizations performed in the private physician's office are recorded in a central file at the county health department; only in this manner will we ever be assured of adequate immunization levels.

### Acknowledgement

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# Medical Progress

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## Osteoporosis

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**O**STEOPOROSIS is not a single disease entity with a "cause" and a "cure." It represents a non-specific reaction of the skeleton to a wide range of stimuli. It has a well known relationship to certain disease states and physiological conditions while many other cases of osteoporosis in fact, the majority, are the so-called postmenopausal, senile and idiopathic osteoporosis in which etiological factors are less clear. It will be the purpose of this paper to briefly review some basic concepts concerning osteoporosis, its clinical features and associations, diagnosis, and some approaches to the difficult question to therapy.

The term osteoporosis means increased porosity of bone and characteristically the weight of whole dry bone, per unit volume is reduced. All the characteristic components are lost proportionately so the composition of osteoporotic bone approximates normal bone. The inorganic mineral and extracellular organic matrix of bone are responsible for structural integrity. The inorganic mineral comprises approximately 65% of the tissue by weight and is primarily calcium phosphate in the form of hydroxyapatite and related crystalline structures. The organic matrix comprises the remainder of the tissue and is primarily collagen.<sup>1</sup>

Normally, resorption of apatite and matrix follow in such close succession as to appear concomitant. Catabolic processes leading to bone resorption occur simultaneously with synthetic processes, so as to remodel newly formed

bone into a specific structural arrangement which fills local mechanical needs.<sup>2</sup>

In osteoporosis the rate of bone resorption must outstrip the rate of bone formation to decrease bone mass so that in that sense bone resorption is excessive. Work by Jowsey and her co-workers has shown that combination histological methods with microradiography can give valid data as to rates of formation and resorption. According to this method bone formation rates appear normal but resorption rates are increased.<sup>3</sup>

The factors which affect bone mass in general and the development of osteoporosis are many and diverse. Age is important; the maximum bone mass being attained between age 20-25 years. Between age 35-75 years, decrements of mineral mass occur annually with a cumulative 50% loss in vertebral bodies and 20-30% loss in several long bones.<sup>2</sup> This peak of total bone mass is greater in men than women and greater in blacks than caucasians.<sup>4</sup> Activity is a factor, with osteoporosis commonly found following disuse or immobilization. Osteoporosis is found in individuals with generalized malnutrition. Glucocorticoid excess increases resorption and decreases formation<sup>1</sup>. Parathyroid hormone is quantitatively an important determinant of the amount of bone resorption. Hereditary disorders occur, and the altered environment of space flight is associated with calcium loss.<sup>2</sup>

For whatever reason, when loss of bone mass becomes sufficient, symptoms may occur and radiological findings become evident. Symptomatically, the onset of acute or chronic back pain or a fracture calls attention to the osteoporosis. Two types of back pain may occur. One is of sudden onset, deep in the

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midline, is very severe, is associated with spasm of the lateral spinal muscles and localized deep tenderness, is made worse by motion and gradually improves over a matter of weeks. These symptoms indicate a fracture or partial fracture of the body of a vertebra. Lower dorsal and lumbar vertebrae are more commonly involved than higher dorsal vertebrae. The other type of pain is deep, aching mid or lower dorsal or lumbar pain that occurs after standing, is made worse by continued activity and relieved by lying down. It may last for many months and is not well correlated with any acute occurrence or x-ray change. It may be associated with a process of gradual collapse of a vertebra or with abnormal stresses in the bone or joint structures brought about by vertebral deformity.<sup>5,6,7</sup> Frank nerve root compression is not common but may occur with radiation of pain according to the site of involvement. Spinal cord compression is extremely rare even in the presence of severe deformity of the spine.<sup>2</sup>

Symptoms fairly frequently occur in the pelvis, as well as the ribs and other long bones. Pathological fractures produce, of course, symptoms indistinguishable from non-osteoporotic fractures and occur most often in the distal radius, the small bones of the hands and feet, and the ribs. Fracture of the hip is also a common problem of considerable magnitude.

The physical signs range also from none at all to considerable deformity and disability. The most important early physical sign is loss of stature due to shortening of the trunk. This may not be noted by the patient, even in the presence of significant change. In adults of average height the top of the symphysis pubis is midway between the crown and the heel, while the total height is approximately equal to the span. In osteoporosis the crown-pubis distance is less than that from pubis to heel, though the latter remains about half the span. As the disease progresses and vertebral bodies collapse further the disproportion increases, and more and more trunk shortening is noted.

At a late stage of the disease there are marked deformities of the spine. The patients develop an exaggerated thoracic kyphosis, often with some scoliosis. In severe cases the lower ribs may overlie the iliac crest and a deep transverse skin crease develops across

the upper abdomen. The result may be a deformed shrunken thoracic cage with diminished vital capacity.<sup>7</sup>

In other patients with severe involvement of other parts of the skeleton, especially the long bones, obvious signs such as angulation and deformity may follow fractures but there may otherwise be few signs. Hypercalcemia with corneal calcification is quite rare in adults with osteoporosis.<sup>7</sup>

Skin changes have been noted in a significant number of patients with osteoporosis;<sup>8</sup> the skin in these patients assuming a transparency, and the details of veins and tendons being clearly visible. It is conjectured that there is not only loss of dermal collagen but there may be a change in structure of the collagen. There may also be said to be this difference between normal bones and those of osteoporosis: in osteoporosis the bone mass is reduced, with loss of collagen.

The "washed out" appearance of severely osteoporotic bone is of course well known but methods have been sought to detect earlier changes and to quantitate change. In a simple, easily used method, anterior vertebral height is measured in each vertebra as one proceeds downward through the spinal column. If the vertebral height decreases, the vertebra can be said to be involved. Cortical thickness of bone is considerably more reliable than the general appearance of "bone density" and may be quantitated in normal and abnormal bones.<sup>9</sup> In the mid shaft of the femur for example, the cortical thickness should be at least 50% of the total diameter. Singh and his group<sup>10</sup> have proposed an index based on the roentgenographic pattern of trabecular bone in the upper end of the femur to evaluate bone loss. Investigations continue into development of easily applicable methods for diagnosing patients with very early disease.

The main types of osteoporosis are those in which there is no etiology known—the idiopathic type—and others which are associated with well known disease states. These types will be very briefly discussed.

Depending on age of onset, idiopathic osteoporosis has been labeled juvenile, adult, postmenopausal and senile. The juvenile form is exceedingly uncommon, but has been described. Adults in the 20-40 year age group



may rarely suffer from a condition which has the same characteristics as osteoporosis in older patients. Between the ages of 40-60 years it becomes a more common disease especially in women. Since menopause also occurs around this time, this osteoporosis has been called postmenopausal. However, the role of menopause, as distinct from increasing age, is often not clear. The over-60 age group provides most of the osteoporotic patients seen.<sup>7</sup> Again, the same characteristics of osteoporosis apply as in the other age groups, it being even more important, however, in the older age groups to be certain of exclusion of metastatic disease and particularly multiple myeloma.

Osteoporosis may occur in both male and female hypogonadism. However, as has been mentioned, the role of gonadal hormones in postmenopausal osteoporosis is not clear and studies have at times shown contradictory results. It is possible that the metabolic alterations at the time of menopause may provide a suitable stimulus for an exacerbation of osteoporosis, the main cause being of another origin.<sup>7</sup> Metabolism of the bone matrix is altered also in the presence of other endocrine disorders, including hyperthyroidism and acromegaly.

There is association of osteoporosis with various chronic wasting diseases such as malignant tumors and rheumatoid arthritis.<sup>2</sup> In rheumatoid arthritis the picture is complex since osteoporosis does occur in rheumatoid arthritis in the absence of corticosteroid therapy, one quarter of the patients in one series being affected. In addition, however, corticosteroid therapy has been shown to have a significant effect on the development of osteoporosis in patients so treated.<sup>11</sup> Indeed, in any condition in which corticosteroid therapy is administered for a sufficient length of time, development of osteoporosis is an important consideration.

In the diagnosis of idiopathic osteoporosis, it is essential that exclusion of diseases other than osteoporosis be rigorous. The presence of vertebral fracture in people of either sex less than 35 years old is likely to be due to some disease other than osteoporosis. Malignancy, Cushing's Syndrome, thyrotoxicosis and hyperparathyroidism must be considered. Multiple myeloma, which in its early stages may not

show discrete bone lesions, can be difficult to recognize unless a bone marrow, electrophoretic studies or Bence Jones protein yields positive information. Nontropical sprue or other forms of malabsorption, which can be subtle early in their course, may present as osteoporosis and osteomalacia. Osteoporosis often is found in patients who have osteomalacia, since patients with mild absorptive impairment, as can often be present after gastric surgery, fail to absorb proper amounts of both vitamin D (causing osteomalacia) and calcium (causing osteoporosis).<sup>5</sup>

Certainly there cannot be said to be a satisfactory treatment for osteoporosis. Much work remains to be done, but efforts are being made to systematically evaluate modes of treatment, and increasing amounts of information concerning mechanisms of action and the comparative value of various regimens are becoming available.

During phases of acute severe pain, analgesics must be given to alleviate pain, and an orthopedic brace or corset may be necessary to maintain support of the spine. Bed rest may be necessary for a few days until subsidence of the most severe pain. Subsequent chronic aching may be relieved by hyperextension exercises to strengthen paraspinal muscles. A diet containing two glasses of whole or skim milk is recommended. A small daily supplement (1000 units) of vitamin D may also be prescribed.<sup>12</sup>

Estrogenic hormones have been used for many years. Courses of a few months or less have produced calcium retention and a decrease of bone resorbing surfaces. However, other studies indicate that after nine months or more these effects are not maintained and begin to reverse somewhat.<sup>13</sup> Nevertheless estrogen therapy of up to ten years appears to have a favorable effect by reducing the loss of bone mass in non-osteoporosis postmenopausal women and by a decrease in the number of fractures in osteoporotic women. For optimal results cyclical courses of 1.25 mg daily of an estrogen preparation seems necessary, but this dose is rather poorly tolerated by many women.<sup>12</sup>

Effective therapeutic doses of testosterone in osteoporotic women invariably produce virilization, but may be used to advantage in osteo-

porotic men.<sup>12</sup> The anabolic steroids are not so clearly of benefit in non-virilization dosages but there have been reports of their effective use in selected cases.<sup>14</sup>

The diet may be supplemented by 1 to 1.5 gm of elemental calcium as the carbonate salt, in an effort to decrease parathyroid hormone secretion and consequently reduce bone resorption.

Several investigational methods, such as the use of calcitonin and the intravenous infusion of calcium have aroused great interest but are not yet recommended for general use. However, a combined therapeutic regimen of sodium fluoride, calcium and vitamin D is promising in that after one year of therapy an increase in new bone formation occurred and the regimen was in general well tolerated.<sup>15</sup> Longer study and larger numbers of patients will of course be required for final evaluation but it is a regimen worth trying in selected patients, perhaps with the addition of estrogens. We are currently using a regimen of 600 to 1000 mg of elemental calcium per day, 20 mg of sodium fluoride per day and 50,000 units of vitamin D twice weekly. This regimen is being

used particularly in the difficult problems of patients who require large doses of corticosteroids and develop rapid osteoporosis.

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## Renal Problems

## Critical Care Medicine

## Sex and Its Consequences

## Pollution

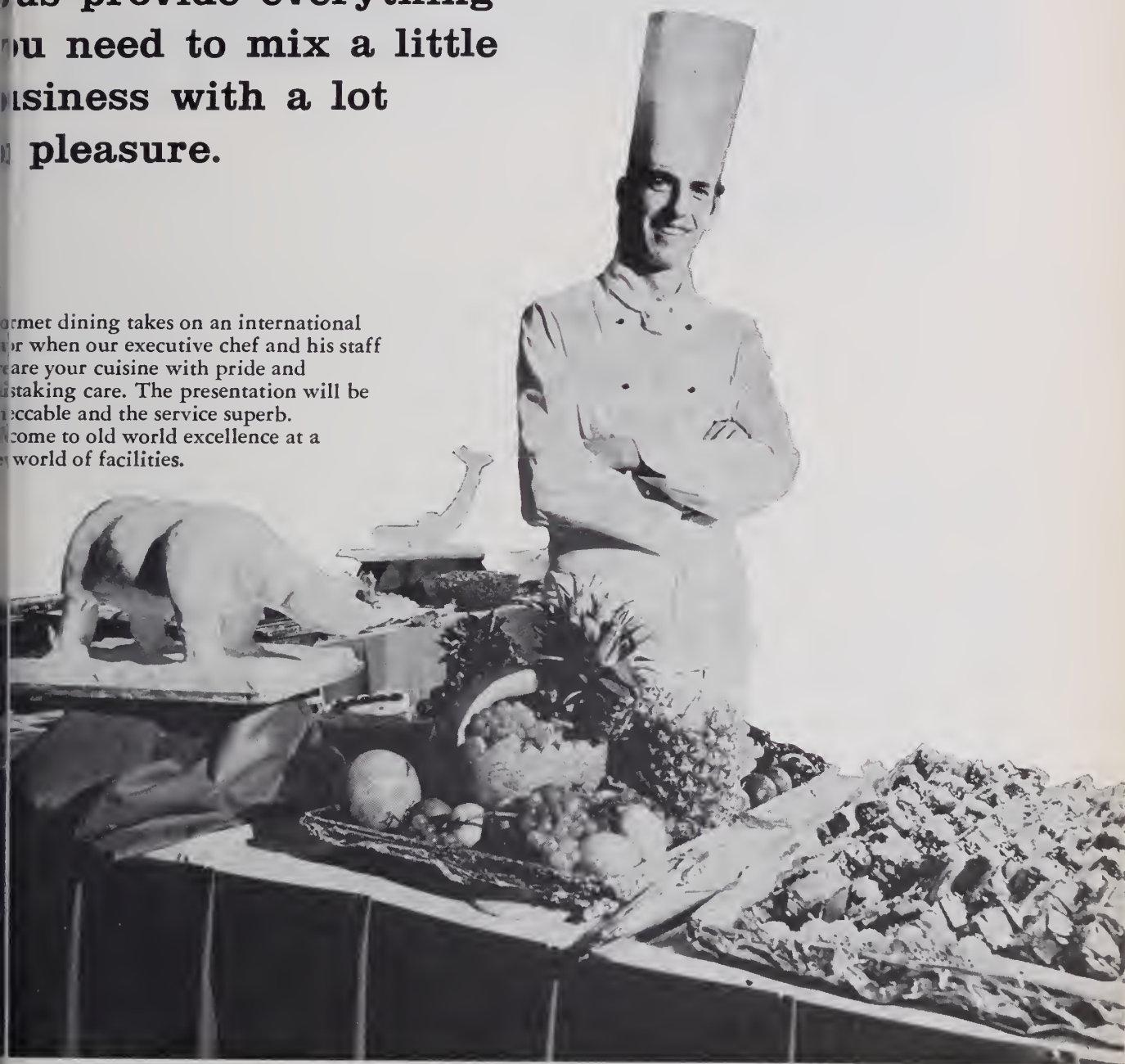
## Themes for 1973 Scientific Program

(See Pages 528-533)



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## EDITORIALS



### September Song

**T**UESDAY, Wednesday, and Thursday, September 18, 19 and 20, 1973. Please, right now, ask your secretary to block these days out of your office and hospital schedule. Pull out your pocket appointment book and block them off yourself. Ask your wife to arrange her time to be free to join you those days. Set up your reservation at Ramada Inn, Louisville, promptly (there is a Holiday Inn and a Sheraton Motel at the same intersection, too). Then join your fellow physicians next month in Kentucky's biggest and best general medical meeting — the 1973 KMA Annual Meeting.

Professional activities will range from the many socio-economic, educational and political concerns of the House of Delegates and the Board of Trustees, to the interesting, instructional offerings of the general and specialty society sessions. The program is well thought out, with nationally recognized speakers from Michigan, North Carolina, Louisiana, Texas, Pennsylvania, Indiana, Tennessee, New York, Ohio, Georgia, Illinois, Maryland, Virginia, Canada, Massachusetts, and last but definitely not least, several from Kentucky! The topics

covered are indeed topical (to coin a phrase), starting with several presentations about "Critical Care Medicine", moving on to a discussion of various aspects of "Pollution", reviewing uremia and other "Renal Problems", and climaxing (you should pardon the expression) in a symposium on "Sex and Its Consequences". How can you resist?

The Bluegrass Convention Center is where it's at — adjacent to Ramada Inn, just east of Louisville. The new River City Mall (our old 4th Street) and the riverside Belvedere are open, and they're both close enough and impressive enough to warrant your inspection. Oxmoor and the Shelbyville Road Mall are nearby; it's quite possible to enjoy yourself window-shopping in either Mall without spending anything at all, but your wife will probably find heightened pleasure in a purchase or two!

Don't miss Mark Russell at the KEMPAC Dinner — his talk at last year's President's Luncheon was one of the wittiest and most enjoyable these old ears have ever heard.

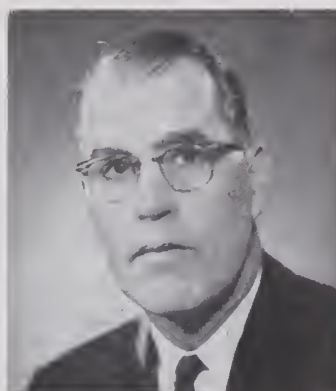
Come — your many friends look forward to seeing you. September 18, 19 and 20.

WHj



## George H. Archer, M. D.

### 1915-1973



**G**EORGE Preston Archer, M.D., was born in Floyd County, Kentucky, on September 10, 1915. He was the son of Doctor and Mrs. Ernest E. Archer, members of a pioneer Floyd County family.

A graduate of the University of Kentucky, he received his medical degree from the University of Louisville in 1941. From that day forward, there are few men in the history of this Association who crowded so much service to so many organizations into such a short period of time.

From the time that Doctor Archer was discharged from the United States Army in 1946 as a Major in the Medical Corps, until his untimely and tragic death on July 12, 1973, he served his profession, his patients, his community, his church and this Commonwealth with unflinching zeal and high purpose. It would be almost impossible in this brief article to mention all of the many accomplishments of Doctor Archer, but because of his tremendous dedication to this Association and his profession, it is imperative that we herein recount some of those accomplishments for posterity.

He began the private practice of medicine in Prestonsburg, Kentucky, in 1947. In 1949, the Kentucky Junior Chamber of Commerce named him one of the State's "Three Outstanding Young Men" for his extensive work in civic affairs at the local and state level. In 1948, he began his service to the Prestonsburg School Board, eventually serving as its Chairman. He served as a member of the Board of the First Methodist Church in Prestonsburg and was Chairman of that official Board for two terms. During his years in practice he took time to be active in the Prestonsburg Kiwanis Club, the Lonesome Pine Council of the Boy Scouts of America, and among his civic accomplishments, which are almost too numerous to mention, he was three times elected Mayor of the city he loved so dearly.

He was President of the Floyd County Medical Society in 1950, but his dedication to that Society and this Association never ended until his death. He was instrumental in forming the Kentucky Chapter, American Academy of Family Physicians, was a charter member of that organization and served as its first Secretary. In 1954 Doctor Archer was named Chairman of the Floyd County Board of Health and still served that organization at the time of his death.

We would be remiss in this article if we did not mention in detail Doctor Archer's tremendous service to the Kentucky Medical Association and its affiliated organizations. He served on committees of this Association almost every year he practiced medicine. A firm believer in the private practice of medicine, Doctor Archer was one of the founders of and the first Chairman of KEMPAC. It was largely through his efforts that this organization gained recognition from the KMA House of Delegates. He never lost his interest in the activities of the KEMPAC Board and was active in that organization until his death.

Doctor Archer served as President of the Kentucky Medical Association in 1963-64. During his term as President, he continued his outspoken fight in behalf of the free enterprise system and the profession he held in such high regard.

We could go on and on listing his accomplishments. However, we feel the most fitting way to end this article would be a quotation from one of the resolutions which nominated him for the Kentucky Medical Association Distinguished Service Award in 1960. That resolution stated, "There are few men of any age in the Kentucky Medical Association who have done all these things for their community and their profession." Surely, those of us who had the privilege of knowing and working with Doctor George Preston Archer will not soon forget his lasting contribution to his profession, his patients, this Association and the community and State he loved so well.

# Continuing Educational Opportunities

From The

## KMA Postgraduate Medical Education Office

### IN KENTUCKY

#### AUGUST

- 26 Symposium on "The Current Status of Fungal Infections in Kentucky;" Sponsors: University of Kentucky Medical Center and Kentucky Chapter, American Academy of Family Physicians; Ramada Inn, Lexington

#### SEPTEMBER

- 18-20 KMA ANNUAL MEETING, Ramada Inn/Bluegrass Convention Center, Louisville  
21-22 Postgraduate seminar\*, "Nephrology for the Practicing Physician," University of Kentucky Medical Center, Lexington. Registration fee: \$40. Seven hours of AAFP credit.

#### OCTOBER

- 1-3 Scientific program\*, "Changing Concepts and Methods in the Practice of Cardiology," University of Kentucky Medical Center, Lexington, sponsored by U.K. College of Medicine and Indiana University School of Medicine. Registration fee: \$100 (for members of the American College of Cardiology) \$125 (for non-members).  
7-13 Family Medicine Review Program\*, University of Kentucky Medical Center, Lexington. Registration fee: \$185. AAFP credit has been requested for 54 hours.

#### NOVEMBER

- 7 Ninth Annual Louisville Pediatric Lecture, by Melvin Grumbach, M.D., University of Louisville School of Medicine, Health Sciences Center Auditorium, Louisville  
8-9 Newborn Symposium, "Congenital Defects — Management and Outcome", Department of Pediatrics, University of Louisville School of Medicine, Health Sciences Center Auditorium, Louisville

*\*For further information contact: Ronald D. Hamilton, M.D., Director, Continuing Education, College of Medicine, University of Kentucky, Lexington, Kentucky 40506.*

### IN SURROUNDING STATES

#### SEPTEMBER

- 6 Postgraduate course in CME (accredited by AMA), "Implementation of Recommendations of the Secretary's Commission on Malpractice," Cleveland Clinic, Cleveland  
8 Seminar, "Industrial Injuries of the Hand," East Pavilion Auditorium Barnes Hospital, St. Louis. (Contact: Paul M. Weeks, M.D., Professor of Surgery, Washington University, 4960 Audubon Avenue, St. Louis, Missouri 63110)  
17-18 AMA Annual Congress on Occupational Health, Benjamin Franklin Hotel, Philadelphia

#### OCTOBER

- 1-2 Tennessee Valley Medical Assembly, Read House, Chattanooga  
20-24 Annual Meeting, American Academy of Pediatrics, Palmer House, Chicago  
21-25 Annual Scientific Assembly, American College of Chest Physicians, Four Seasons Hotel, Toronto, Ontario, Canada

#### NOVEMBER

- 14-17 Seminar on "Life-Saving Measures for the Critically Injured," sponsored by the American College of Surgeons and the University of Tennessee College of Medicine, Shriber Auditorium, Memphis

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- Consistent cure rates above 90 percent are to be expected. The rate often approaches 100 percent.
- Simple, sure treatment for women: One 250-mg. tablet three times daily for ten days.
- Simple, sure treatment for men: One 250-mg. tablet twice daily for ten days concurrent with treatment of the female partner.
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**Indications:** For the treatment of trichomoniasis in both male and female patients and in the sexual partners of patients with a recurrence of the infection provided trichomonads have been demonstrated by wet smear or culture. The oral tablets are indicated also for acute intestinal amebiasis (amebic dysentery) and amebic liver abscess.

**Contraindications:** Evidence or history of blood dyscrasia, active organic disease of the CNS, the first trimester of pregnancy and a history of hypersensitivity to metronidazole.

**Warnings:** Use with discretion during the second and third trimesters of pregnancy and restrict to those pregnant patients not cured by topical measures. Flagyl (metronidazole) is secreted in the breast milk of nursing mothers. It is not known whether this can be injurious to the newborn.

**Precautions:** Mild leukopenia has been reported during Flagyl use; total and differen-

tial leukocyte counts are recommended before and after treatment with the drug, especially if a second course is necessary. Avoid alcoholic beverages during Flagyl therapy because abdominal cramps, vomiting and flushing may occur. Discontinue Flagyl promptly if abnormal neurologic signs occur. Exacerbation of moniliasis may occur. In amebic liver abscess, aspirate pus during metronidazole therapy.

**Adverse Reactions:** Nausea, headache, anorexia, vomiting, diarrhea, epigastric distress, abdominal cramping, constipation, a metallic, sharp and unpleasant taste, furry or sore tongue, glossitis and stomatitis possibly associated with a sudden overgrowth of *Monilia*, exacerbation of vaginal moniliasis, an occasional reversible moderate leukopenia, dizziness, vertigo, incoordination and ataxia, numbness or paresthesia of an extremity, fleeting joint pains, confusion, irritability, depression, insomnia, mild erythematous eruptions, "weakness," urticaria, flushing, dryness of the

mouth, vagina or vulva, pruritus, dyscystitis, a sense of pelvic pressure, dyspareunia, fever, polyuria, incontinence, decreased libido, nasal congestion, proctitis, pyuria, darkened urine have occurred in patients receiving the drug. Patients receiving Flagyl may experience abdominal distress, nausea, vomiting or headache if alcoholic beverages are consumed. The taste of alcoholic beverages may also be modified. Flattening of the T wave may be seen in ECG tracings.

**Dosage and Administration: For Trichomoniasis. In the female:** One 250-mg. tablet orally three times daily for ten days. Course may be repeated if required in especially stubborn cases; in such patients an interval of two to six weeks between courses and total differential leukocyte counts before, during, after treatment are recommended. Vaginal inserts of 500 mg. are available for use, particularly in stubborn cases. *When the vaginal inserts are used, one 500-mg. insert is placed*





the vaginal vault each day for ten days and oral dosage is reduced to two 250-mg. tablets daily during the ten-day course of treatment. Do not use the vaginal inserts as the sole mode of therapy. *In the male:* Prescribe Flagyl when trichomonads are demonstrated in the urogenital tract, one 250-mg. tablet two times daily for ten days. Flagyl should be taken by both partners over the same ten-day period when it is prescribed for the male in conjunction with the treatment of his female partner.

**Amebiasis.** *Adults:* For acute intestinal amebiasis, 750 mg. orally three times daily for 5 to 10 days. For amebic liver abscess, 500 mg. orally three times daily for 5 to 10 days. *Children:* 35 to 50 mg./kg. of body weight/24 hours, divided into three doses, daily for ten days.

**Dosage forms:** Oral tablets 250 mg.  
Vaginal inserts 500 mg.

#### References:

1. Perl, G., and Ragazzoni, H.: Flagyl in Treatment of "Trichomonas Vaginalis" Vaginitis, *Obstet. Gynecol.* 19:595-598 (May) 1962. 2. Kean, B. H.: Trichomoniasis in Males (Letters to the Journal), *J. A. M. A.* 186:273 (Oct. 19) 1963. 3. King, A. J.: Current Therapeutics: CLVI.—Metronidazole in the Treatment of Trichomonal Infections, *Practitioner* 185:808-812 (Dec.) 1960. 4. Watt, L., and Jennison, R. F.: Clinical Evaluation of Metronidazole: A New Systemic Trichomonocide, *Br. Med. J.* 2:902-905 (Sept. 24) 1960. 5. Watt, L., and Jennison, R. F.: Metronidazole Treatment of Trichomoniasis in the Female, *Br. Med. J.* 1:276-279 (Feb. 3) 1962. 6. Teton, J. B., and Treadwell, N. C.: Evaluation of a Systemic Trichomonocide, *Obstet. Gynecol.* 21:356-362 (March) 1963. 7. Durel, P.; Roiron, V.; Siboulet, A., and Borel, L. J.: Systemic Treatment of Human Trichomoniasis with a Derivative of Nitro-Imidazole, 8823 R. P., *Br. J. Vener.*

*Dis.* 36:21-26 (March) 1960. 8. Bertrand, P., and Leulier, J.: Essais cliniques sur la trichomonase des partenaires des femmes infestées (Proceedings of the 1st Canadian Symposium on Non-Gonococcal Urethritis and Human Trichomoniasis, Montreal, 1959), *Gynaecologia* 149:93-96 (Suppl.) 1960. 9. Poole-Wilson, D. S.: The Diagnosis and Management of Chronic Infection of the Bladder, *Practitioner* 186:429-437 (April) 1961.

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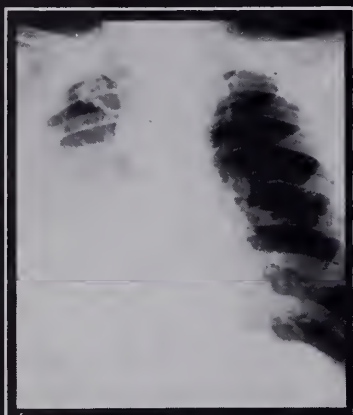
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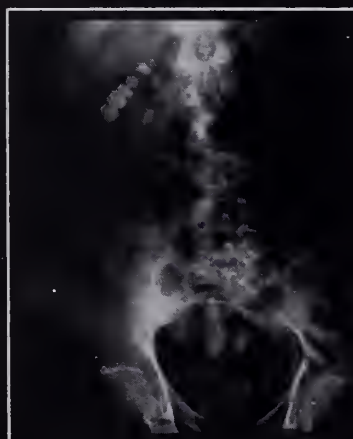
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1973

*Annual Meeting Section*

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# *KMA Officers*

*1972-1973*



LEE C. HESS, M.D.  
PRESIDENT



Fred C. Rainey, M.D.  
President-Elect



James B. Holloway, M.D.  
Vice-President



## PRESIDENT-ELECT

**Fred C. Rainey, M.D.**  
**Elizabethtown**

Doctor Rainey will be installed as President of the Kentucky Medical Association at the President's Luncheon on Wednesday, September 19, during the 1973 Annual Meeting.

A 1955 graduate of the University of Tennessee College of Medicine, Doctor Rainey has practiced general medicine in Elizabethtown since 1957 and is currently associated with the Woodland Medical Clinic there.

An enthusiastic participant in civic and political activities, he has held a number of positions in the Jaycee organizations, including President of the Ken-

tucky Jaycees and Vice-President of the U.S. Jaycees. In addition to these activities, he has served as Chairman of the Hardin County Board of Health.

Very active in the work of organized medicine, Doctor Rainey is the Immediate Past Chairman of the KEMPAC Board of Directors and a former Chairman for State Affairs of the KMA Committee on Legislative Activities. He has served on numerous other committees of the Association, including Senior Day, Nominating, Interim Meeting Program and Scientific Program, and has served as an Alternate Delegate to the AMA, as well as a KMA Delegate from Hardin County.

## VICE-PRESIDENT

**James B. Holloway, M.D., Lexington**

An Associate Clinical Professor of Surgery at the University of Kentucky College of Medicine, Doctor Holloway is the Immediate Past President of the Fayette County Medical Society. He has been very dedicated to Associational affairs, having served as Chairman of the KMA Hospital Committee for 13 years and a member of the Advisory Committee to Blue Shield for eight years.

Doctor Holloway, a Lexington surgeon, received his M.D. degree from Yale University Medical School in 1945. A Fellow of the American College of Surgeons, Doctor Holloway belongs to the Southern Surgical Association and the Southern Society of Clinical Surgeons, as well as the Kentucky and Lexington Surgical Societies.

## SECRETARY

**S. Randolph Scheen, M.D., Louisville**

Doctor Scheen, an Assistant Clinical Professor at the University of Louisville School of Medicine and at the University of Kentucky College of Medicine, is now serving his sixth year as KMA Secretary. A 1953 graduate of U of L, he received his Master of Science Degree in dermatology from the University of Minnesota in 1960. His service to the Association includes membership on the Judicial Council and an active involvement with the Interim and Annual Meetings. Doctor Scheen belongs to the American Academy of Dermatology and the Alumni Association of the Mayo Foundation.



## TREASURER

**Keith P. Smith, M.D., Corbin**

Treasurer of the Association since 1963, Doctor Smith has also served KMA as Vice-President, Chairman of the Board of Trustees and a Trustee from the 15th District from 1957-63. He is a 1936 graduate of the University of Louisville School of Medicine and is in the practice of general surgery in Corbin. Also active in the Kentucky Academy of Family Physicians, Doctor Smith is a former Academy President and Vice-President. He is a member of the Southern Surgical Association, the American Academy of Family Physicians and the Kentucky Obstetrical and Gynecologic Society.



## Officers of the House of Delegates

### SPEAKER

**Richard F. Greathouse, M.D., Louisville**

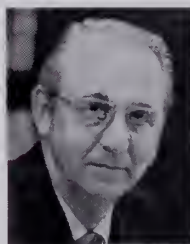
Having served as Speaker of the KMA House of Delegates since 1966, Doctor Greathouse has been an active participant in the affairs of organized medicine. He has served as KMA Vice-Speaker and former delegate from the Jefferson County Medical Society. A 1951 graduate of the University of Louisville School of Medicine, he is Associate Professor of Pediatrics at the U of L School of Medicine and School of Dentistry. A past Secretary-Treasurer of KEMPAC, he has also served as Vice Chairman of the Kentucky Chapter, American Academy of Pediatrics.



### VICE-SPEAKER

**Carl Cooper, Jr., M.D., Bedford**

Serving now as Chairman of the KEMPAC Board of Directors, Doctor Cooper is a former KMA Vice-President and Alternate Delegate to the AMA. A 1952 graduate of the University of Louisville School of Medicine, he is an active member of the Kentucky Academy of Family Physicians, having served as Vice-President and Director of that organization. Doctor Cooper received the KAFP "Citizen Doctor of the Year" Award in 1970. He is a member of the Kentucky Health Council and is very active in civic organizations in his area.



## AMA Delegates

**J. Thomas Giannini, M.D., Louisville**

Doctor Giannini is the Senior Delegate to AMA from Kentucky, having served since 1963 as Delegate or Alternate Delegate. He is a former Chairman of the KMA Scientific Exhibits Committee and served as a delegate from the Jefferson County Medical Society. A native of Harlan, he graduated from the University of Louisville School of Medicine in 1938. Doctor Giannini is currently the Secretary-Treasurer of the Kentucky Society for Plastic and Reconstructive Surgery and serves on the Board of the Kentucky Blue Cross Hospital Plan, Inc.



**John C. Quertermous, M.D., Murray**

Active in Association affairs, Doctor Quertermous is a Past KMA President, a former Chairman of the Committee on Legislative Activities for National Affairs and a former Chairman of the KEMPAC Board. He previously served as Delegate to the AMA from 1963-69. A 1942 graduate of the University of Louisville School of Medicine, he has practiced internal medicine in Murray since 1950. Doctor Quertermous has been active in civic affairs, having served on the Governor's Citizens Committee on the Problems of Aging.



**David B. Stevens, M.D., Lexington**

An orthopaedic surgeon, Doctor Stevens has served as either an Alternate Delegate or Delegate to the AMA since 1965. He is a member of the AMA Committee on Quackery and is a former Chairman of the KMA Committee on Cults. A 1955 graduate of Northwestern University Medical School, he is Assistant Clinical Professor of Surgery at the University of Kentucky College of Medicine. Doctor Stevens is a Past President of the Fayette County Medical Society and the Kentucky Orthopaedic Society.





## Journal Editors

### EDITOR

**Walter I. Hume, Jr., M.D., Louisville**

Elected as Editor of *The Journal* in August, 1970, Doctor Hume had previously served as Assistant Editor since 1967. Involved in the affairs of the Kentucky Foundation for Medical Care, Doctor Hume is a member of its Board of Directors, Chairman of the KFMC Health Care Delivery Committee and a member of its Bylaws Committee. He is Associate Clinical Professor of Surgery at the University of Louisville School of Medicine and a 1949 graduate of Harvard Medical School. Doctor Hume is also a Past President of the Jefferson County Medical Society.



### ASSOCIATE EDITOR

**Henry B. Asman, M.D., Louisville**

Doctor Asman, now in his second term as Associate Editor, has served the Association in many capacities.



He is a Past President and Vice-President of KMA, was the first President of the Kentucky Foundation for Medical Care and is a former KMA Secretary. Currently, he is Director of Medical Services for Kentucky Blue Cross and Blue Shield. A 1936 graduate of the University of Louisville School of Medicine, Doctor Asman now serves on the KMA Committee on Public Relations and is on the Board of Directors of the Kentucky Chamber of Commerce.

### ASSISTANT EDITOR

**A. Evan Overstreet, M.D., Louisville**

Appointed in 1972 as Assistant Editor of *The Journal*, Doctor Overstreet has practiced internal medicine in Louisville for several years. He is a 1955 graduate of the University of Louisville School of Medicine. Doctor Overstreet is an active participant in county society activities and is a member of the Jefferson County Medical Society Grievance Committee. He belongs to the American Society of Internal Medicine, American College of Physicians and the Transylvania Medical Society.



### SCIENTIFIC EDITOR

**Charles C. Smith, Jr., M.D., Louisville**

Doctor Smith has served in the position of Scientific Editor of *The Journal* since 1967. A 1955 graduate of the University of Louisville School of Medicine, he has practiced internal medicine in Louisville since 1962. Assistant Clinical Professor of Medicine at the U of L School of Medicine, Doctor Smith is a Fellow of the American College of Physicians.



## New Trustees

**Edward N. Maxwell, M.D., Louisville**

Trustee from the Fifth District, Doctor Maxwell is Chairman of the Department of Radiology at St. Joseph Infirmary and Assistant Clinical Professor of Radiology at the University of Louisville School of Medicine. He is a Past President of the Kentucky TB and RD Association. A 1944 graduate of the Medical College of Virginia, Doctor Maxwell is a member of the KFMC Board of Directors.

**Earl B. Rynerson, M.D., Winchester**

Doctor Rynerson was elected Trustee from the Eleventh KMA District. A 1951 graduate of the University of Louisville School of Medicine, Doctor

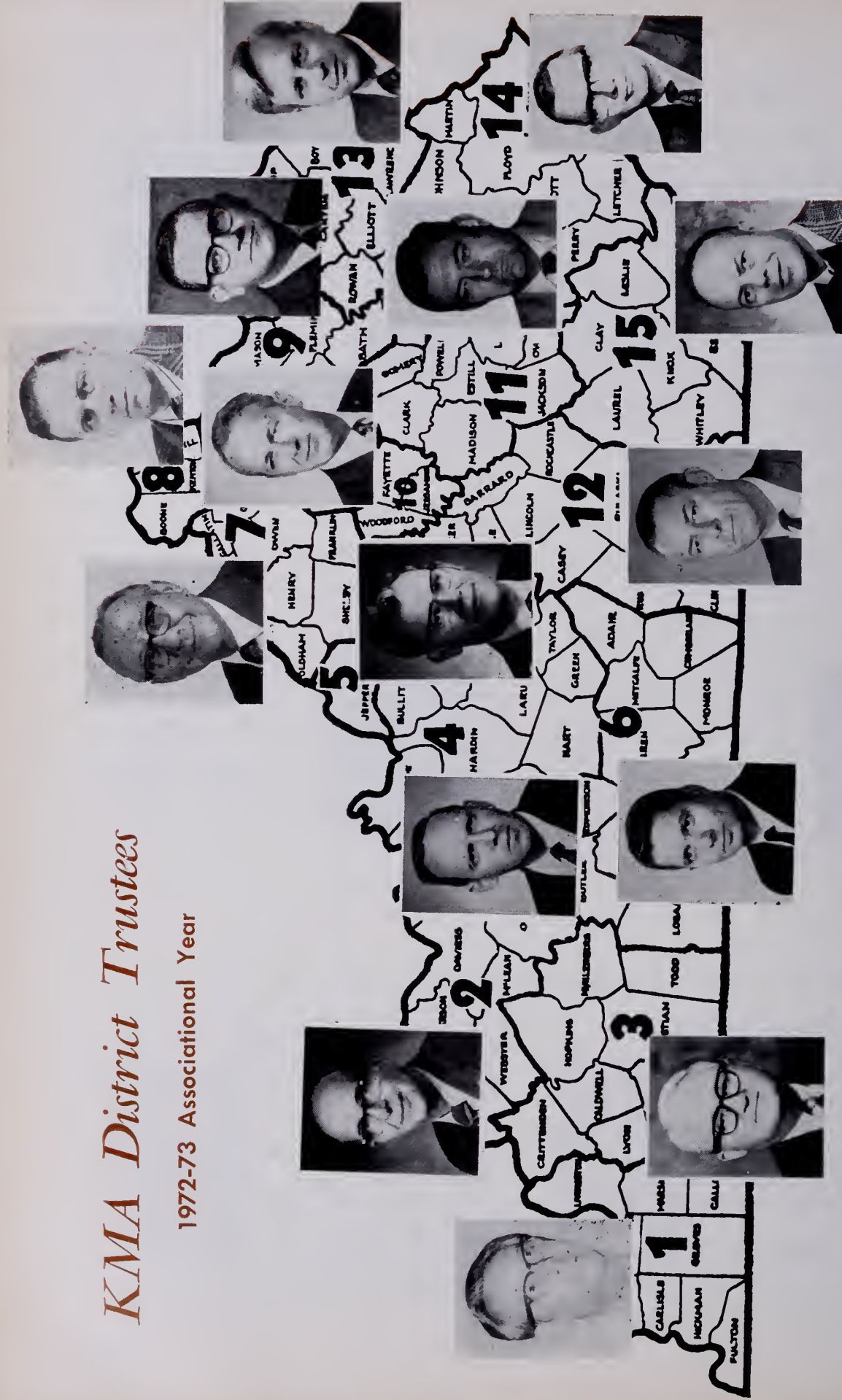
Rynerson is currently on the staff of Clark County Hospital and is a former President of the Clark County Medical Society. He is a member of the American Academy of Family Physicians.

**Harold L. Bushey, M.D., Barboursville**

Fifteenth District Trustee Doctor Bushey is a member of the KMA Committee on Appalachian and OEO Programs and the Budget Committee. A 1954 graduate of the University of Rochester Medical School, he has served as Secretary of the Knox County Medical Society and is a member of the Cumberland Valley Comprehensive Health Planning Council.

# KMA District Trustees

1972-73 Associational Year



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R. M. Brandon, Marion

### CUMBERLAND

Joseph Schickel, Burkesville

### DAVISS

James H. Callis, Owensboro  
John S. Oldham, Owensboro  
Marilyn M. Sanders,  
Owensboro

### EDMONSON

S. E. Farmer, Brownsville

### ELLIOTT

### ESTILL

S. G. Marcum, Irvine

### FAYETTE

Ted D. Ballard, Lexington  
Leslie W. Blakey, Lexington  
Peter P. Bosomworth,  
Lexington  
Thomson R. Bryant, Jr.,  
Lexington  
Winston L. Burke, Lexington  
W. K. Burkhart, Lexington  
Thomas F. Coats, Lexington  
Glenn U. Dorroh, Lexington  
Richard D. Floyd, Lexington  
Ward O. Griffen, Lexington  
Richard F. Hench, Lexington  
Richard B. McElvein,  
Lexington  
Carl H. Scott, Lexington  
John E. Trevey, Lexington  
James G. Wilhite, Lexington

### FLEMING

R. W. Fidler, Flemingsburg

### FLOYD

William D. Pratt, McDowell

### FRANKLIN

W. H. Keller, Frankfort  
W. S. Snyder, Jr., Frankfort

### FULTON

### GALLATIN

### GARRARD

Paul J. Sides, Lancaster

### GRANT

Darl B. Shipp, Dry Ridge

### GRAVES

C. Douglas LeNeave, Mayfield

### GRAYSON

Victor F. Duvall, Clarkson

### GREEN

George C. Cheatham,  
Greensburg

### GREENUP

Manuel S. Garcia, Flatwoods

### HANCOCK

B. Presley Smith, Hawesville

### HARDIN

T. J. Ferriell, Jr., Elizabethtown  
Terrell D. Mays, Elizabethtown

### HARLAN

R. Smith Howard, Harlan  
Paul O. Wells, Harlan

### HARRISON

D. R. Stephens, Cynthiaana

### HART

George B. Boeckmann,  
Horse Cave

### HENDERSON

Kenneth M. Eblen, Henderson  
John W. McClellan, Henderson  
Roy W. Montgomery,  
Henderson

### HENRY

Wyatt Norvell, New Castle

### HICKMAN

C. J. Mills, Clinton

### HOPKINS

James G. Gulley, Madisonville  
K. P. Haywood, Madisonville

### JACKSON

Philip R. Curd, McKee

### JEFFERSON

John D. Allen, Jr., Louisville  
James R. Barnes, Louisville  
David H. Bizot, Louisville  
William H. Bizot, Louisville  
Alan M. Bornstein, Louisville  
McHenry S. Brewer, Louisville  
Glenn W. Bryant, Louisville  
W. Neville Caudill, Louisville  
Alvin M. Churney, Louisville  
Eugene H. Conner, Louisville  
John H. Doyle, Louisville  
Andrievs J. Dzenitis, Louisville  
Rudy J. Ellis, Louisville  
Harold G. Eskind, Louisville  
Edward J. Fadell, Louisville  
William H. Gillespie, Louisville  
Richard F. Greathouse,  
Louisville  
Edward M. Haick, Louisville  
Harold D. Haller, Louisville  
Eugene H. Kremer, III,  
Louisville  
Robert L. McClendon,  
Louisville  
Clyde T. Moore, Louisville  
Charles R. Oberst, Louisville  
William J. Oliver, Louisville  
Robert G. Overstreet, Louisville  
C. Kenneth Peters, Louisville  
C. R. Potts, Louisville  
James F. Rice, Louisville  
W. Fielding Rubel, Louisville  
William J. Sandman, Jr.,  
Louisville  
Robert P. Schiavone, Louisville  
David C. Shipp, Louisville  
Edward C. Shrader, Louisville  
Lloyd G. Yopp, Louisville

**JESSAMINE**  
J. Sankey Williams,  
Nicholasville

**JOHNSON**  
F. K. Belhasen, Paintsville

**KNOTT**

**KNOX**  
Cora B. Acosta, Barbourville

**LARUE**  
Marion A. Douglass, Jr.,  
Magnolia

**LAUREL**  
Edward C. Lauber, London

**LAWRENCE**  
A. B. Richards, Louisa

**LEE**

**LESLIE**

**LETCHER**  
Jim B. Tolliver, Whitesburg

**LEWIS**  
Milton L. Brindley, Vanceburg

**LINCOLN**  
Rodney K. Bates, Stanford

**LIVINGSTON**  
Stephen Burkhart, Salem

**LOGAN**  
C. V. Dodson, Russellville

**LYON**  
M. H. Moseley, Eddyville

**MCCRACKEN**  
Edwin T. Davis, Paducah  
Wally O. Montgomery, Paducah  
James C. Seabury, Paducah

**MCCREARY**

**MCLEAN**  
E. S. Coleman, Sacramento

**MADISON**  
R. Eugene Bowling, Richmond  
Wilbur R. Houston, Richmond

**MAGOFFIN**

**MARION**

**MARSHALL**  
Keith E. Ellis, Benton

**MARTIN**  
Raymond D. Wells, Inez

**MASON**  
Claude E. Cummins, Jr.  
Maysville

**MEADE**

**MENIFEE**

**MERCER**  
Bacon R. Moore, Harrodsburg

**METCALF**  
L. P. Emberton, Edmonton

**MONROE**  
James R. Head, Tompkinsville

**MONTGOMERY**  
Don C. McFadden, Mt. Sterling

**MORGAN**  
George R. Bellamy,  
West Liberty

**NELSON**  
Christopher Harrison,  
Bardstown

**NICHOLAS**  
W. R. Kingsolver, Carlisle

**OHIO**  
Robert E. Norsworthy,  
Hartford

**OLDHAM**

**OWEN**  
O. A. Cull, Owenton

**OWSLEY**  
Mildred B. Gabbard,  
Booneville

**PENDLETON**  
Robert L. McKenney,  
Falmouth

**PENNYRILE MULTI-COUNTY**  
Caldwell: N. H. Talley,  
Princeton  
Christian: Ben L. Crowder,  
Hopkinsville  
Frank R. Pitzer, Hopkinsville  
Muhlenberg: Ronilo D. Diaz,  
Greenville  
Todd: Henry R. Bell, Elkton  
Trigg: William N. Richardson,  
Cadiz

**PERRY**  
Keith W. Cameron, Ary

**PIKE**  
F. G. Cox, Pikeville  
Frank Varney, Stone

**POWELL**

**PULASKI**  
J. Roy Biggs, Somerset  
Danny Clark, Somerset

**ROBERTSON**

**ROCKCASTLE**

**ROWAN**  
Ewell G. Scott, Morehead

**RUSSELL**  
Charles E. Peck,  
Russell Springs

**SCOTT**  
R. Kendall Brown, Georgetown

**SHELBY**

**SIMPSON**  
L. F. Beasley, Franklin

**SPENCER**  
William K. Skaggs,  
Taylorsville

**TAYLOR**

**TRIMBLE**  
Carl Cooper, Bedford

**UNION**  
Wallas N. Bell, Sturgis

**WARREN**  
Keith Coverdale,  
Bowling Green  
Nelson B. Rue, Bowling Green  
Gerald Sullivan, Bowling Green

**WASHINGTON**  
Dixie Snider, Springfield

**WAYNE**

**WEBSTER**

**WHITLEY**  
R. D. Pitman, Williamsburg

**WOLFE**  
Paul F. Maddox, Campton

**WOODFORD**  
Lewis E. Wash, Lawrenceburg

#### REGISTRATION INFORMATION

A registration booth will be located in the Technical Exhibit Hall of the Bluegrass Convention Center throughout the Annual Meeting. The booth will open at 8:00 a.m., Tuesday, Wednesday and Thursday, September 18-20.

Please register and wear your badge at all times while attending the meeting.

#### MAKE YOUR RESERVATIONS NOW

It is important that you begin making your room reservations as soon as possible for the KMA Annual Meeting, September 18-20. The Ramada Inn at I-64 and Hurstbourne Lane will be the Headquarters Hotel, however there are several other accommodations within easy reach of Ramada Inn and the Bluegrass Convention Center.



# Reference Committee Activity

Speaker Richard F. Greathouse, M.D., Louisville, will assign all officers' and committees' reports and resolutions to one of six reference committees at the first meeting of the KMA House of Delegates at 9 a.m., Monday, September 17. Briefing sessions for reference committee chairmen will be held at 12:30 p.m., Monday, in the Majestic Room, Bluegrass Convention Center. Any KMA member wishing to testify on any resolution or report is urged to be present for the reference committee meetings which will be held at 2 p.m., Monday, September 17, at Bluegrass Convention Center. These open sessions will last at least one hour in order for all who wish to speak to be heard. Following the open hearings, the committees will go into executive sessions to study the reports, review the testimony and write their reports to the House.

The committees' recommendations will be presented at the final session of the House, Wednesday night, September 19, in the Bluegrass Convention Center. Listed below are the reference committees appointed by Doctor Greathouse to serve during the 1973 session.

## 1973 Reference Committee Appointments

### REFERENCE COMMITTEE NO. 1 Island Queen and Idlewild Room

John E. Trevey, M.D., Lexington, Chairman  
L. F. Beasley, M.D., Franklin  
Glenn W. Bryant, M.D., Louisville  
A. B. Richards, M.D., Louisa  
Charles D. Eversole, M.D., Covington

### REFERENCE COMMITTEE NO. 4 Grand Republic Room

John M. Baird, M.D., Danville, Chairman  
W. N. Richardson, M.D., Cadiz  
Richard B. McElvein, M.D., Lexington  
McHenry S. Brewer, M.D., Louisville  
Larry B. Craycraft, M.D., Ashland

### REFERENCE COMMITTEE NO. 2 Cincinnati Room

Earl P. Oliver, M.D., Scottsville, Chairman  
Lloyd G. Yopp, M.D., Louisville  
Richard F. Hench, M.D., Lexington  
Paul J. Sides, M.D., Lancaster  
Nelson B. Rue, M.D., Bowling Green

### REFERENCE COMMITTEE NO. 5 Delta Queen Room

W. Fielding Rubel, M.D., Louisville, Chairman  
Thomson R. Bryant, Jr., M.D., Lexington  
N. H. Talley, Jr., M.D., Princeton  
Paul F. Maddox, M.D., Campton  
W. H. Keller, M.D., Frankfort

### REFERENCE COMMITTEE NO. 3 Eclipse Room

Robert G. Overstreet, M.D., Louisville, Chairman  
James G. Wilhite, M.D., Lexington  
William R. Yates, M.D., Hebron  
Raymond D. Wells, M.D., Inez  
Marilyn M. Sanders, M.D., Owensboro

### REFERENCE COMMITTEE NO. 6 Natchez Room

Wyatt Norvell, M.D., New Castle, Chairman  
T. J. Ferriell, Jr., M.D., Elizabethtown  
C. R. Potts, M.D., Louisville  
Robert E. Smith, M.D., Covington  
Wally O. Montgomery, M.D., Paducah

## OFFICIAL CALL

### KMA Annual Meeting

To the officers and members of the component county medical societies of the Kentucky Medical Association.

#### Meeting Place

The Annual Meeting of KMA will convene on Tuesday, Wednesday and Thursday, September 18, 19 and 20, at the Bluegrass Convention Center, Louisville. The first general session will be called to order at 8:50 a.m., Tuesday.

#### The House of Delegates

The first regular session of the House of Delegates will convene at 9:00 a.m., Monday, September 17, in the Jeffersonian Room of Ramada Inn. The second regular business session will begin at 7:00 p.m., Wednesday, September 19, in the Banquet Area at Bluegrass Convention Center.

#### Registration

The registration desk will open outside the Jeffersonian Room of Ramada Inn at 8:00 a.m., Monday, September 17 and at 6:00 p.m., Wednesday, September 19 in Bluegrass Convention Center. It will

be open in the Technical Exhibit Hall of Bluegrass Convention Center from 8:00 a.m. to 5:00 p.m., Tuesday, Wednesday and Thursday, September 18-20.

### House to Elect New Officers During Annual Meeting

KMA officers for the 1973-74 Associational year will be elected by the House of Delegates at the close of its final session Wednesday evening, September 19. Officers to be selected this year are:

President-Elect	(Central District)	One Year
Vice-President	(Western District)	One Year
Delegates to AMA	*(John C. Quertermous, Murray)	Two Years
	*(David B. Stevens, Lexington)	Two Years
Alternate Delegates	*(William W. Hall, Owensboro)	Two Years
	*(Thomas L. Heavern, Jr., Highland Heights)	Two Years

\*Incumbent

The AMA Delegates and Alternates from KMA are to be elected for two year terms, from January 1, 1974 to December 31, 1975.

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# ELECTIONS

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### Election of Trustees and Alternate Trustees

The House of Delegates will elect five district trustees and five alternate trustees at its second regular session, Wednesday, September 19. Nominations will be made by the delegates from the electing districts at a meeting following the first session of the House on Monday, September 17.

The Nominating Committee will report at the close of the first scientific session on Tuesday, September 18. Further nominations may be made from the floor at the final session of the House on Wednesday evening, September 19. All nominations are considered and acted upon by the delegates at this final session.

Districts electing trustees for three-year terms are: SECOND DISTRICT (incumbent, Charles C. Kissinger, M.D., Henderson); SEVENTH DISTRICT (incumbent, Thomas P. Leonard, Sr., M.D., Frankfort); NINTH DISTRICT (incumbent, J. Campbell Cantrill, M.D., Georgetown); TENTH DISTRICT (incumbent, David A. Hull, M.D., Lexington); THIRTEENTH DISTRICT (incumbent, J. Wesley Johnson, M.D., Ashland).

Districts electing alternate trustees are the same as those electing trustees. Incumbents are Kenneth M. Eblen, M.D., Henderson (2nd); John P. Stewart, M.D., Frankfort (7th); James L. Ferrell, M.D., Paris (9th); Irving Kanner, M.D., Lexington (10th); and Arthur B. Richards, M.D., Louisa (13th).

Trustees and alternate trustees of the 2nd, 7th, 10th and 13th Districts are eligible for re-election; while the trustee and alternate of the 9th District have served two full terms and are not eligible for re-election.



## *Annual Meeting Special Features*



*Bluegrass Convention Center  
Louisville, Kentucky*

*Ramada Inn*

**SCIENTIFIC SESSIONS**, featuring many timely medical topics and nationally recognized speakers, are scheduled for September 18, 19 and 20 at the Bluegrass Convention Center, located at I-64 and Hurstbourne Lane behind the Ramada Inn in Louisville. "Critical Care Medicine," "Pollution," "Renal Problems," and "Sex and Its Consequences," are themes for the four general sessions. In-depth presentations and discussion periods make the KMA Annual Meeting an outstanding vehicle for continuing medical education.

**SIXTEEN SPECIALTY GROUPS** will hold meetings on the afternoons of September 18 and 20. No general sessions are scheduled for those afternoons and all KMA members are invited to attend any of the specialty group meetings.

**THE HOUSE OF DELEGATES**, KMA's top policy-making body, will meet twice during this year's Annual Meeting. The first session of the House will be held at 9 a.m., Monday, September 17, in the Jeffersonian Room at Ramada Inn. The final session will be held in the Bluegrass Convention Center on Wednesday, September 19, at 7 p.m. Officers for the 1973-74 Associational year will be elected at the final session.

**THE PRESIDENT'S LUNCHEON** will feature Robert H. Henry of Rockville, Maryland, as guest speaker. Mr. Henry is the Director of Professional Affairs of the U. S. Pharmacopeial Convention, Inc. and will speak on "The U.S.P. — Give It to the Elephants." The Luncheon will be held at 11:50 a.m., Wednesday, September 19, in the Banquet Area of the Bluegrass Convention Center. Other highlights of the Luncheon include presentation of KMA's awards and installation of the 1973-74 President of the Association.

**SCIENTIFIC AND TECHNICAL EXHIBITS** will display the latest in medical products, services and techniques at the Bluegrass Convention Center during the 1973 Annual Meeting. Members and guests will have the opportunity to view products of interest at the thirty-minute intermissions scheduled during each general and specialty group session.

**ALUMNI REUNIONS** will be held again this year for the five-year classes of the University of Louisville School of Medicine.

**THE WOMAN'S AUXILIARY TO KMA** will hold its 51st Annual Convention, September 17-19 at the Ramada Inn. Special entertainment and business sessions have been planned.

## KEMPAC RECEPTION — DINNER — SEMINAR

Monday, September 17, 1973  
6:00 p.m., EDT  
Ramada Inn  
Belle Hall  
Bluegrass Convention Center  
featuring  
**MARK RUSSELL**  
Political Satirist



Political satirist and entertainer. Resident comedian at Shoreham Hotel in Washington, D.C. since 1961. Appeared on numerous television network programs and hosted two Washington television shows of his own. Newsmakers of all political stripes are often found in his audience and he spares none of them—as he puts it—The idea is to poke the needle without drawing blood.

The KEMPAC Board of Directors invites you to make plans to attend and hear this most interesting and entertaining speaker.

Carl Cooper, M.D., KEMPAC Chairman, urges you to get your tickets as soon as they become available.

### Nominating Committee to Meet Monday, September 17

An open meeting of the KMA Nominating Committee will be held following the close of the first session of the House of Delegates, Monday, September 17, in the Jeffersonian Rooms of the Ramada Inn.

Any KMA member has the privilege of conferring with the Committee during this meeting. Final recommendations of the Committee will be reported at the end of the first scientific session, Tuesday morning, September 18.

Nominations may be made from the floor during the second meeting of the House of Delegates, Wednesday evening, September 19. The House will vote on the nominees at the close of this session.

Members of the Nominating Committee, chaired by Glenn W. Bryant, M.D., Louisville, are: William E. Becknell, M.D., Manchester; William J. Sandman, M.D., Louisville; John E. Trevey, M.D., Lexington, and James O. Willoughby, M.D., Bowling Green.

### Number To Use For Messages To Be 491-1929

A Message Center will be set up once again during the 1973 Annual Meeting where you may be reached in case of an emergency or for routine messages. The number is (502) 491-1929.

Staffed at all times during the meeting, the Message Center will be located in the center of the Technical Exhibit Hall at the Bluegrass Convention Center. Paging of individual physicians is not possible due to the arrangement of facilities for the meeting.

Only emergency calls will be posted on the blackboard in the entrance lobby of Bluegrass Convention Center and in the Scientific Assembly Hall. All other

messages will be kept on file at the Message Center until you call for them. Please remember to check there often for any messages.

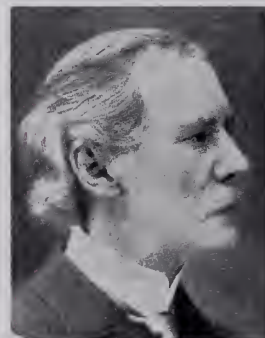
It will be possible to locate other physicians attending the meeting by asking the Message Center to keep your message for pick-up.

The phone number at the Headquarters Hotel, Ramada Inn, is 267-8201. You may be reached during the meetings of the House of Delegates by calling that number. Your name will be posted on a blackboard at the front of the room when you receive a call.

You are urged to make use of the Message Center. Be sure to leave these phone numbers at your home, office and hospital.

### 1973 Annual Meeting To Honor Past President Arch Dixon

The 1973 Annual Meeting of the Kentucky Medical Association will be officially titled "The Arch Dixon Memorial Meeting" in remembrance of the 1893 President of the Association.



Doctor Dixon

The tradition of honoring a past president of KMA or some distinguished physician each year at the Annual Meeting originated in 1935.

Eugene H. Conner, M.D., Louisville, KMA Historian, has written a biography on Doctor Dixon for the Annual Meeting program booklet, which will be distributed at the meeting in Louisville, September 18-20.



# 1973 Annual Meeting Program Summary

## The Kentucky Medical Association

September 16, 17, 18, 19 and 20

Bluegrass Convention Center/Ramada Inn

Louisville

### SUNDAY, SEPTEMBER 16

12:30 p.m. Luncheon Meeting, KMA Board of Trustees ..... Natchez Room, Convention Center

### MONDAY, SEPTEMBER 17

9:00 a.m. First Meeting, KMA House of Delegates ..... Jeffersonian Room, Ramada Inn

12:30 p.m. Luncheon for Reference Committee Chairmen ..... Majestic Room, Convention Center

2:00 p.m. Reference Committee Meetings ..... Island Queen—Idlewild Rooms, Cincinnati Room, Eclipse Room, Grand Republic Room, Delta Queen Room, Natchez Room, Convention Center

6:00 p.m. KEMPAC Reception, Banquet and Seminar ..... Banquet Area, Convention Center

### TUESDAY, SEPTEMBER 18

8:00 a.m. Registration ..... Technical Exhibit Hall, Convention Center

8:50 a.m. Opening Ceremonies ..... Scientific Assembly Hall, Convention Center

9:00 a.m. First Scientific Session ..... Scientific Assembly Hall, Convention Center

12:00 noon Executive Committee and Reference Committee Chairmen Luncheon and Meeting ..... Mark Twain Room, Ramada Inn

2:00 p.m. Specialty Group Sessions, Convention Center and Kentucky Room, Ramada Inn (Nine Specialty Group Sessions will be held simultaneously at this time. KMA members may attend any of these meetings. There will be no General Session at this time. See scientific program.)

5:30 p.m. Reception honoring Fred C. Rainey, M.D. and Mrs. William Pearson ..... Poolside, Ramada Inn

### WEDNESDAY, SEPTEMBER 19

9:00 a.m. Second Scientific Session ..... Scientific Assembly Hall, Convention Center

11:50 a.m. President's Luncheon ..... Banquet Area, Convention Center

2:00 p.m. Third Scientific Session ..... Scientific Assembly Hall, Convention Center

3:30 p.m. Orientation Program, New KMA Members ..... Grand Republic Room, Convention Center

4:00 p.m. Board of Trustees Meeting and Dinner (6 p.m.) ..... Natchez Room Convention Center

7:00 p.m. Meeting, KMA House of Delegates ..... Banquet Area, Convention Center

### THURSDAY, SEPTEMBER 20

9:00 a.m. Fourth Scientific Session ..... Scientific Assembly Hall, Convention Center

12:30 p.m. Board of Trustees Luncheon and Meeting ..... Majestic—New Orleans Room, Convention Center

2:00 p.m. Specialty Group Sessions, Convention Center (Seven Specialty Group Sessions will be held simultaneously at this time. KMA members may attend any of these meetings. There will be no General Session. See scientific program.)

A 30-minute intermission has been scheduled during each morning and afternoon Scientific Session for visiting Scientific and Technical Exhibits.

*(Full Scientific Program starts on the next page)*

# The Kentucky Medical Association SCIENTIFIC PROGRAM

Arch Dixon Memorial Meeting  
Bluegrass Convention Center, Louisville

## TUESDAY, SEPTEMBER 18 MORNING SESSION

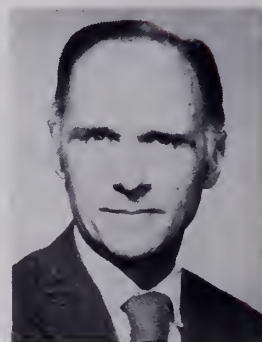
### General Session

*Lee C. Hess, M.D., Florence*  
*KMA President, Presiding*

- 8:50 Opening Ceremonies  
THEME: "Critical Care Medicine"
- 9:00 "Battered Child Syndrome"  
Ray E. Helfer, M.D., East Lansing, Mich.
- 9:20 "Biliary Tract Infection"  
William W. Shingleton, M.D., Durham, N.C.
- 9:40 "Extrication and Transportation of the Critically Injured Patient"  
Jack K. Wickstrom, M.D., New Orleans, La.
- 10:00 Intermission to Visit Exhibits
- 10:30 "Laboratory Utilization Patterns in Critical Care Medicine"  
Hubert J. Van Peenen, M.D., Houston, Tex.
- 10:50 "Critical Care Medicine—Its Evolution and Present Status"  
Don M. Benson, M.D., Pittsburgh, Pa.
- 11:10 "Technical Approach to the Acute Abdomen"  
Roscoe E. Miller, M.D., Indianapolis, Ind.
- 11:30 "Facial Injuries—Evaluation and Care"  
James H. Hendrix, M.D., Memphis, Tenn.

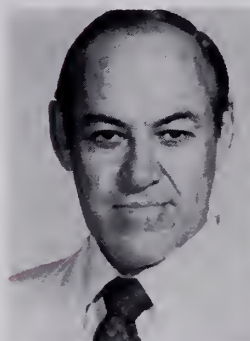
### RAY E. HELFER, M.D. East Lansing, Michigan

Associate Professor, Department of Human Development, Michigan State University. M.D., 1955, State University of New York. Past President, Ambulatory Pediatric Association. Member, American Academy of Pediatrics, Association of American Medical Colleges. Author of articles dealing with pediatric interviewing, child abuse and peer evaluation.



### WILLIAM W. SHINGLETON, M.D. Durham, North Carolina

Professor of Surgery, Duke University Medical Center. M.D., 1943, Bowman Gray School of Medicine, Wake Forest College. Director, Duke University Medical Center Cancer Program. Chairman, Subcommittee on Diagnosis and Treatment, National Advisory Cancer Council, National Institutes of Health. Member, Committee on Treatment, Breast Cancer Task Force of the National Cancer Institute. Member, National Cancer Advisory Board.



### JACK WICKSTROM, M.D. New Orleans, Louisiana

Lee C. Schlesinger Professor and Chairman, Division of Orthopaedic Surgery, Tulane University School of Medicine. M.D., 1939, University of Nebraska School of Medicine. Member, Allied Health Professions and Services Committee, American Academy of Orthopaedic Surgeons. Vice-President, American Orthopaedic Association. Chairman, Disaster Medical Care Committee, Louisiana State Medical Society. Editorial board member, four national journals.



## TUESDAY, SEPTEMBER 18 AFTERNOON SESSION

### Nine Specialty Group Meetings

*(The scientific programs of nine specialty groups, beginning at 2 p.m., will feature prominent guest speakers from throughout Kentucky and the nation. All KMA members are invited to attend the specialty group meetings of their choice. There will be no general scientific session at this time. All meetings will be held in the Bluegrass Convention Center.)*



**HUBERT J. VAN PEENEN, M.D.**  
Houston, Texas



Chairman, Department of Pathology, University of Texas Medical School at Houston. M.D., 1954, University of California School of Medicine. Chief, Pathology Service, Hermann Hospital. Fulbright lecturer in the medical sciences in Spain, 1963-64. Member, Academic Clinical Laboratory Physicians and Scientists, American Society of Clinical Pathologists, American Association of Pathologists and Bacteriologists.

**DON M. BENSON, M.D.**  
Pittsburgh, Pennsylvania



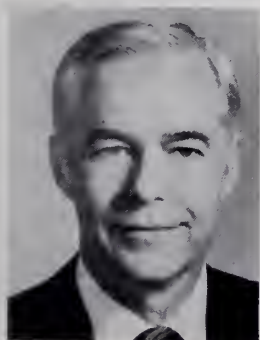
Assistant Professor of Anesthesiology, University of Pittsburgh. M.D., 1965, Georgetown University School of Medicine. Medical Director, Intensive Care Unit Ambulance Service, Freedom House Enterprise, Inc., Pittsburgh. Member, Subcommittee on Cardiac Emergencies and on Ambulance Service, National Academy of Sciences; Cardiopulmonary Resuscitation and Emergency Care Committee, American Heart Association, Pennsylvania Affiliate.

**ROSCOE E. MILLER, M.D.**  
Indianapolis, Indiana

Professor, Department of Radiology, Indiana University School of Medicine. M.D., 1951, Indiana University. Member, Advisory Panel on Radiologic Contrast Media, U.S. Pharmacopeia. Fellow, American College of Radiology and member of its Committee on Radiologic Coding and Cancer Detection. Member, Radiological Society of North America and American Roentgen Ray Society.



**JAMES H. HENDRIX, JR., M.D.**  
Memphis, Tennessee



Professor of Surgery and Head of Section of Plastic Surgery, University of Tennessee. M.D., 1943, University of Tennessee College of Medicine. President-Elect, American Society of Plastic and Reconstructive Surgeons. President-Elect, Clinical Society of University Plastic Surgeons. Director of Burn Service, City of Memphis Hospitals. Past President, Southeastern Society of Plastic and Reconstructive Surgeons.

**Kentucky Society of Anesthesiologists**  
Delta Queen Room

- 2:00 "The Anesthesiologist's Role in the Pre-Hospital Emergency Care"  
Don M. Benson, M.D., Pittsburgh, Pa.
- 2:45 "Effects of Large Doses of Intravenous Atropine on Heart Rate of Anesthetized Patients"  
Donald J. Carrow, M.D., Louisville
- 3:00 Intermission to Visit Exhibits
- 3:30 "Shaking the Shivers After Anesthesia"  
Shirley Liem, M.D., Louisville
- 3:45 "Recent Innovations in the Anesthetic Management of Carotid Endarterectomy"  
K. P. Geevarghese, M.D., Louisville
- 4:00 "Althesin, A New Intravenous Anesthetic"  
B. Roy Simpson, M.D., London, England
- 4:30 Business Session

**Kentucky Chapter,  
American College of Chest Physicians**  
Majestic—New Orleans—Island Queen Rooms

- 2:00 "Cardiac Revascularization, Status 1973"  
Joe R. Utley, M.D., Lexington
- 2:15 "New Developments in the Management of Acute Arrhythmia"  
Armond T. Gordon, M.D., Louisville
- 2:30 Intermission to Visit Exhibits
- 3:00 "Air Pollution and its Respiratory and Cardiovascular Effects"  
Bertram W. Carnow, M.D., Chicago, Ill.
- 3:30 Stump the Expert Session (bring your x-rays)
- 4:00 Business Meeting

**Kentucky Orthopaedic Society**  
Grand Republic Room

To Be Announced

**Kentucky Society of Pathologists**  
Cincinnati Room

- 2:00 "Classification of Lymphomas"  
Phillip Lieberman, M.D., New York, N.Y.
- 3:00 Intermission to Visit Exhibits
- 3:30 Topic to be announced  
H. J. Van Peenen, M.D., Houston, Tex.

**Kentucky Chapter,  
American Academy of Pediatrics**  
Assembly Hall

- 2:00 "The Pediatrician's Role in Child Abuse and Neglect"  
Ray E. Helfer, M.D., East Lansing, Mich.
- 3:00 "Investigation of Child Abuse, Kentucky Style 1973"  
Martha Flanagan, Louisville  
Sherwin Spero, MSSW, Louisville
- 3:00 Intermission to Visit Exhibits
- 3:45 "A Child Psychiatrist Looks at Child Abuse"  
Otto Kaak, M.D., Lexington

**Kentucky Society for  
Plastic and Reconstructive Surgery  
Idlewild Room**

- 2:00 "Trauma"  
James H. Hendrix, M.D., Memphis, Tenn.
- 2:30 "Rhinoplasty"  
Morton L. Kasdan, M.D., Louisville
- 2:50 "Otoplasty"  
Gerald D. Verdi, M.D., Louisville
- 3:10 "Neck Surgery"  
Norman M. Cole, M.D., Louisville
- 3:30 Intermission to Visit Exhibits
- 4:00 "Face Lift"  
Louis M. Muldrow, M.D., Lexington
- 4:20 "Hemangioma of the Mandible"  
Michael Bryant, M.D., Lexington
- 4:30 Business Meeting

**Kentucky Chapter,  
American College of Radiology  
Eclipse Room**

- 2:00 "Hypotonic Radiography with Glucagon"  
Roscoe E. Miller, M.D., Indianapolis, Ind.

**Kentucky Chapter,  
American College of Surgeons  
Natchez Room**

- 2:00 "Cystic Disease of Pancreas"  
Phil J. Harbrecht, M.D., Louisville
- 2:15 "Neonatal Intestinal Obstructions"  
Robert P. Belin, M.D., Lexington
- 2:30 "Management of Severe Facial Fractures"  
Leonard J. Weiner, M.D., Louisville
- 2:45 "Colonfiberoptic Studies"  
Carl O. Knutson, M.D., Louisville
- 3:00 Intermission to Visit Exhibits
- 3:30 "Clinical Studies in Breast Cancer"  
William W. Shingleton, M.D., Durham, N.C.
- 4:00 "Rationale of Myocardial Revascularization"  
Myron W. Wheat, M.D., Louisville
- 4:15 "Management of Ureteral Injuries"  
Mohammad Amin, M.D., Louisville

**Kentucky Urological Association  
Louisville and Kentucky Rooms  
(Ramada Inn)**

- 2:00 "Pyeloplasty"  
Lester Persky, M.D., Cleveland, Ohio
- 3:00 Intermission to Visit Exhibits
- 3:30 Pyelogram Hour
- 4:00 Business Meeting

**WALTER H. MALONEY, M.D.  
Cleveland, Ohio**



Associate Professor and Director of Otolaryngology, Case Western Reserve University School of Medicine. M.D., 1943, Temple University School of Medicine. Editor-In-Chief, "Otolaryngology." President, Philadelphia Bronchoscopic Club. Delegate, AMA Council on Otorhinolaryngology. Secretary, American Broncho-Esophagological Association. Member, American Academy of Facial Plastic and Reconstructive Surgery, Inc.

**KENNETH D. SNAWDER, D.M.D.  
Louisville, Kentucky**



Associate Professor and Chairman, Department of Pedodontics, University of Louisville School of Dentistry. D.M.D., 1967, University of Kentucky School of Dentistry. Member, American Dental Association, American Academy of Pedodontics, American Society of Dentistry for Children and Southeastern Pedodontic Society. Advisor to Louisville and Floyd County Dental Assistant Society.

**BERTRAM W. CARNOW, M.D.  
Chicago, Illinois**



Professor and Director, Occupational and Environmental Medicine, University of Illinois School of Public Health. M.D., 1951, Chicago Medical School. Professor, Department of Preventive Medicine and Community Health, University of Illinois Abraham Lincoln School of Medicine. Medical Director, Chicago Lung Association. Environmental scientist, State of Illinois Institute for Environmental Quality.

**JAMES LEWIS PIPKIN, M.D.  
San Antonio, Texas**



Clinical Professor of Dermatology, University of Texas Medical School. M.D., 1926, University of Texas Medical School at Galveston. Recipient of 1st Clark W. Finnerud Award by Dermatology Foundation, 1971. Past president of the Southern Medical Association Section of Dermatology. Member, American Academy of Dermatology and Syphilology, Society of Investigative Dermatology. Author and co-author of numerous articles and books.



**ELI A. FRIEDMAN, M.D.**  
Brooklyn, New York



Professor of Medicine, Downstate Medical Center, Brooklyn, M.D., 1957, State University of New York. Editor, National Kidney Foundation Newsletter. Member, editorial board, Nephron. Member, American and New York Societies of Nephrology. Member, Medical Advisory Board, New York Kidney Foundation; American Society for Artificial Internal Organs and American Federation for Clinical Research.

**LESTER PERSKY, M.D.**  
Cleveland, Ohio



Professor of Urology, Western Reserve University, M.D., Johns Hopkins University School of Medicine, 1944. Consultant, American Board of Urology. Member, American Association of Clinical Urologists, American Association of University Urologists. Fellow, American College of Surgeons. Member, American Society for the Surgery of Trauma, American Urological Association, American Pediatric Association.

**ROBERT H. HENRY**  
Rockville, Maryland



Director of Professional Affairs, The United States Pharmacopoeial Convention, Inc. M.Sc., 1971, University of Mississippi. Former Director of Pharmacy Operations, Medical College of Virginia. Coordinates work of U.S.P. with professions of pharmacy and medicine, Boards of Pharmacy, medical and pharmacy schools and governmental agencies.

**LLOYD B. TEPPER, M.D.**  
Rockville, Maryland



Associate Commissioner for Science, Food and Drug Administration. M.D., 1957, Harvard Medical School. Chairman, Committee on Radiological Health, Industrial Medical Association. Former Chairman, Atomic Energy Commission Fellowship Board. Member, American Academy of Occupational Medicine, American Conference of Governmental Industrial Hygienists.

## WEDNESDAY, SEPTEMBER 19 MORNING SESSION

### General Session

*James B. Holloway, M.D., Lexington*  
*KMA Vice-President, Presiding*

#### THEME: "Pollution"

- 9:00 "Noise Pollution—Cause and Effect"  
Walter H. Maloney, M.D., Cleveland, Ohio
- 9:30 "Pollution of the Oral Environment"  
Kenneth Snawder, D.M.D., Louisville
- 9:50 "The Impact of Changing Pesticide Usage on the Medical Community"  
Anne R. Yobs, M.D., Chamblee, Ga.
- 10:10 Intermission to Visit Exhibits
- 10:40 "Health Hazards of Pollution"  
Richard P. O'Neill, M.D., Lexington
- 11:00 "Air Pollution in Relation to Morbidity and Mortality"  
Bertram W. Carnow, M.D., Chicago, Ill.
- 11:20 "Pollution and Contamination—Some Effects on the Skin"  
James Lewis Pipkin, M.D., San Antonio, Tex.
- 11:40 Adjournment for President's Luncheon

## PRESIDENT'S LUNCHEON

Banquet Area, Bluegrass Convention Center  
11:50 a.m.

*Lee C. Hess, M.D., Florence*  
*KMA President, Presiding*

#### Invocation

#### Recognition

#### Awards Presentation

*Richard F. Grise, M.D., Bowling Green, Chairman*  
*KMA Awards Committee*

"The U.S.P.—Give It To The Elephants"  
*Robert H. Henry, Rockville, Md.*

Installation of New KMA President

## AFTERNOON SESSION

### General Session

*R. Glenn Greene, M.D., Owensboro*  
*Chairman, KMA Scientific Program Committee,*  
*Presiding*

#### THEME: "Renal Problems"

- 2:10 "Dialysis"  
Eli Friedman, M.D., Brooklyn, N.Y. (*appearing on behalf of the Kentucky Kidney Foundation*)
- 2:40 "Operable Cancer of the Prostate"  
Lester Persky, M.D., Cleveland, Ohio

3:00 "Bladder Cancer of Industrial Etiology"  
Lloyd B. Tepper, M.D., Rockville, Md.

3:20 Intermission to Visit Exhibits

3:50 "On the Pathogenesis of Uremia"  
Neal S. Bricker, M.D., Bronx, N.Y.

4:20 Panel Discussion  
R. Glenn Greene, M.D., Owensboro, Moderator

Lester Persky, M.D., Cleveland, Ohio

Lloyd B. Tepper, M.D., Rockville, Md.

Eli Friedman, M.D., Brooklyn, N.Y.

Neal S. Bricker, M.D., Bronx, N.Y.

## THURSDAY, SEPTEMBER 20 MORNING SESSION

### General Session

*Ballard W. Cassady, M.D., Pikeville  
Vice-Chairman, KMA Board of Trustees, Presiding*

THEME: "Sex and Its Consequences"

9:00 "Determinants of Sexual Behavior"  
Charles W. Lloyd, M.D., Hershey, Pa.

9:30 "Common Sexual Problems and their Management"  
Robert C. Long, M.D., Louisville

9:50 "Diagnosis of Gonorrhea in the Female"  
James Curran, M.D., Memphis, Tenn.

10:10 Intermission to Visit Exhibits

10:40 "Sex Counseling"  
Paul J. Fink, M.D., Norfolk, Va.

11:00 "Sex-Linked Genetic Disorders"  
Reynold J. M. Gold, M.B., B.Chir., Ph.D.,  
Montreal, Quebec

11:20 "The Psychological Trauma of Sex or Lack Thereof"  
Nancy C. A. Roeske, M.D., Indianapolis, Ind.

## AFTERNOON SESSION

### Seven Specialty Group Meetings

*(Seven specialty groups will meet at 2 p.m., with outstanding speakers appearing on the programs. All KMA members are invited to these meetings. No general session will be held. All specialty group meetings with the exception of the Kentucky Dermatological Society, will be held in the Bluegrass Convention Center.)*

### Kentucky Dermatological Society General Hospital

2:00 Dermatology Clinic—Examination of Patients

3:00 Intermission

3:30 Presentation and Discussion of Patients  
James Lewis Pipkin, M.D., San Antonio, Tex.,  
Moderator

### Kentucky Chapter, American Academy of Family Physicians Natchez Room

2:00 "Sex Counseling"  
Paul J. Fink, M.D., Norfolk, Va.

NEAL S. BRICKER, M.D.  
Bronx, New York



Professor and Chairman, Department of Internal Medicine, Albert Einstein College of Medicine, M.D., 1949, University of Colorado. Active in National Kidney Foundation. Chairman, Committee on Renal and Metabolic Effects of Space Flight, National Academy of Sciences. President, American Society for Clinical Investigation. Council member, Central Society for Clinical Research.

CHARLES W. LLOYD, M.D.  
Hershey, Pennsylvania



Professor, Department of Obstetrics and Gynecology, M.S. Hershey Medical Center. M.D., 1941, University of Rochester School of Medicine. Head, Division of Reproductive Biology; Director, Endocrine Clinic, M.S. Hershey Medical Center. Member, Scientific Advisory Board, Wisconsin Regional Primate Research Center. Past Director, American Society for Voluntary Sterilization.

ROBERT C. LONG, M.D.  
Louisville, Kentucky



Associate Professor and Chairman, Division of Human Sexuality, Department of Obstetrics and Gynecology, University of Louisville School of Medicine. M.D., 1940, University of Louisville. President, National Health Council. Member, Board of Trustees, SIECUS. Former AMA Delegate and member, Board of Trustees. Chairman, KMA Committee on Health Care of the Poor.

JAMES W. CURRAN, M.D.  
Memphis, Tennessee



Research Instructor and Medical Director, Gonorrhea Complications Study, University of Tennessee, Department of Preventive Medicine. M.D., 1970, University of Michigan. Clinical Research Investigator for the Venereal Disease Branch, Center for Disease Control. Member, American Venereal Disease Association.



**PAUL J. FINK, M.D.**  
Norfolk, Virginia



Chairman, Department of Psychiatry and Behavioral Sciences, Eastern Virginia Medical School. M.D., 1958, Temple School of Medicine. Medical Director, Norfolk Community Mental Health Center. Member, Editorial Board, *Annals of Adolescent Psychiatry*. Member, Publications Committee, American College of Psychiatrists. Fellow, American Psychiatric Association.

**REYNOLD J. MORLEY GOLD, M.B., B.CHIR.**  
Montreal, Quebec

Assistant Professor, Biology, Human Genetics, McGill University. M.B., B.Chir., 1958, Trinity College, Cambridge, England. Ph.D., 1971, McGill University. Lecturer in Pediatrics, McGill University. Fellow, National Genetics Foundation, U.S., 1970.



**NANCY C. A. ROESKE, M.D.**  
Indianapolis, Indiana



Director of Undergraduate Curriculum and Associate Professor, Department of Psychiatry, Indiana University Medical Center. M.D., 1954, Cornell University Medical College. Director of Research, Riley Child Guidance Clinic, Indiana University. Chairman, Task Force on Women, American Psychiatric Association. Member, American Association of Psychiatric Services for Children, American Academy of Child Psychiatry.

**ANNE R. YOBS, M.D.**  
Chamblee, Georgia

Chief, Training and Education Branch, U.S. Environmental Protection Agency. M.D., Duke University School of Medicine. Former Chief, State Services Branch of Office of Pesticide Programs, EPA. Worked in infectious diseases with Communicable Disease Center, U.S.P.-H.S., Atlanta. Formerly in charge of EPA national monitoring programs to measure pesticide residue levels in general population and in ambient air.

## Kentucky Industrial Medical Association Delta Queen Room

- 2:00 "The Role of the Physician in Environmental Health"  
Lloyd B. Tepper, M.D., Rockville, Md.

## Kentucky Chapter, American College of Physicians Grand Republic Room

- 2:00 "Diverticulitis"  
William L. Tyler, M.D., Owensboro
- 2:20 "Echocardiography"  
Jeffrey P. Fowler, M.D., Louisville
- 2:40 "Newer Antibiotic Agents"  
Martin Raff, M.D., Louisville
- 3:00 Intermission to Visit Exhibits
- 3:30 "Diabetic Nephropathy"  
Neal S. Bricker, M.D., Bronx, N.Y.
- 4:00 "Cytotoxic Drugs"  
J. W. Hollingsworth, M.D., Lexington

## Kentucky Obstetrical and Gynecologic Society Majestic-Island Queen Room

- 2:00 "Treatment of Gonorrhea"  
James Curran, M.D., Memphis, Tenn.
- 2:30 "Diagnosis and Treatment of Breast Disease"  
Robert L. Shirley, M.D., Boston, Mass.
- 3:00 Intermission to Visit Exhibits
- 3:30 Panel Discussion on Breast Disease  
John T. Queenan, M.D., Louisville, Moderator  
Robert L. Shirley, M.D., Boston, Mass.  
George B. Sanders, M.D., Louisville  
Gerald M. Peterson, M.D., Louisville  
Alfred O. Miller, M.D., Louisville

## Kentucky Psychiatric Association Assembly Hall

- 2:00 "Gender Identity—The Problem of the True Hermaphrodite"  
Nancy C. A. Roeske, M.D., Indianapolis, Ind.
- 2:30 Questions and Discussion
- 3:00 Intermission to Visit Exhibits
- 3:30 Business Meeting

## Kentucky Association of Public Health Physicians Cincinnati Room

- 2:00 "Genetic Counseling for the Public Health Physician"  
Reynold Gold, M.B., B.Chir., Ph.D., Montreal, Quebec
- 2:30 "What is Ahead for Public Health in Kentucky"  
William P. McElwain, M.D., Frankfort
- 3:00 Intermission to Visit Exhibits
- 3:30 Business Meeting

## Orientation Program Scheduled For September 19

The Fourteenth KMA Orientation Program will be presented September 19, 1973, in the Grand Republic Room of the Bluegrass Convention Center during the 1973 Annual Meeting.

The KMA Committee on Orientation, following the dictates of the House of Delegates, will once more have a voluntary Orientation Program. The changes which were instituted last year will be continued in an effort to provide more information to new members.

Once again, the Committee on Orientation has lined up a distinguished group of guest speakers to address this year's session. That list will include Lee C. Hess, M.D., KMA President; Fred C. Rainey, M.D., President-Elect; Carl Cooper, Jr., M.D., Vice-Speaker, and J. Thomas Giannini, M.D., Senior Delegate to the AMA.

Letters of invitation have been sent to all KMA members who have recently joined the Association. All KMA members are invited to attend the program whether or not they have received an invitation.

Registration for this year's program will be held at 3:00 p.m. and the program will begin at 3:30 p.m. with adjournment scheduled one hour later.

### 14th KMA Orientation Program

*Wyatt Norvell, M.D., New Castle  
Moderator*

- 3:00 p.m. Registration
- 3:30 p.m. Call to Order
- 3:35 p.m. Welcome and Introduction  
Wyatt Norvell, M.D.
- 3:40 p.m. "Your KMA"
- 4:00 p.m. Question and Answer Session
- Lee C. Hess, M.D., Florence  
KMA President
- Fred C. Rainey, M.D., Elizabethtown  
KMA President-Elect
- J. Thomas Giannini, M.D., Louisville  
KMA Senior Delegate to the AMA
- Carl Cooper, Jr., M.D., Bedford  
Vice-Speaker, KMA House of Delegates
- Wyatt Norvell, M.D., New Castle  
Chairman, KMA Committee on Orientation

### President's Luncheon To Feature Awards, Installation & Address

An address by Robert H. Henry, the presentation of KMA's awards and the installation of the 1973-74 President of KMA are highlights of this year's

President's Luncheon for physicians and their wives on Wednesday, September 19.

Mr. Henry, who is Director of Professional Affairs of the U. S. Pharmacopeial Convention, Inc., will speak on "The U.S.P.—Give It to the Elephants," at the Luncheon held at 11:50 a.m. in Belle Hall at the Bluegrass Convention Center. Entertaining, as well as informative, Mr. Henry has spoken to medical-pharmacy groups across the nation.

Presentation of the Distinguished Service Award and the Kentucky Medical Association Award will precede the Luncheon address. Richard F. Grise, M.D., Bowling Green, Chairman of the KMA Awards Committee, will present the two top awards of the Association.

Fred C. Rainey, M.D., Elizabethtown, will be installed as KMA President for the upcoming Associational year during the Luncheon. Doctor Rainey will be sworn in by Robert N. McLeod, Jr., M.D., Somerset, Chairman of the Board of Trustees.

You are urged to purchase your tickets for the President's Luncheon as soon as possible during the Annual Meeting.

### U.L. Alumni Plan Reunions During KMA Annual Mtg.

Reunions are being planned for alumni from ten classes of the University of Louisville School of Medicine. The reunions will be held during the KMA Annual Meeting, September 18-20.

Chairmen of the five-year classes who are planning individual functions are listed below.

1923—Sam A. Overstreet, M.D., 870 Medical Towers South, Louisville, 583-1621.

1928—Pat R. Imes, M.D., 4812 River Road, Louisville, 893-7434.

1933—Naaman H. Burkhead, M.D., 1712 Heyburn Building, Louisville, 584-2421.

1938—J. Thomas Giannini, M.D., 464 Medical Towers South, Louisville, 583-2766.

1943—Clarence E. Quaife, M.D., 2007 Bonnycastle Avenue, Louisville, 451-3948.

1948—Robert S. Heidt, M.D., 2340 Auburn Avenue, Cincinnati, Ohio 45219, (513) 621-9925.

1953—H. C. Bradley, M.D., 416 Medical Towers Building, Louisville, 584-8988.

1958—Morris W. Weiss, M.D., 301 Doctors Office Building, Louisville, 585-4321.

1963—John M. Karibo, M.D., 1000 Medical Arts Building, Louisville, 456-2180.

1968—Joseph H. Fishman, M.D., 1618 Dunbarton Wynde, Louisville, 458-6912.

#### MESSAGE CENTER

491-1929

You may be reached through this number at the Bluegrass Convention Center during the KMA Annual Meeting.

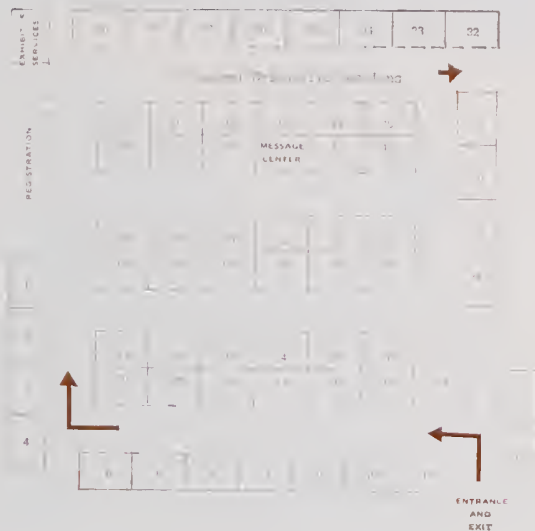


# Latest Research Advances in Products and Services Offered by 1973 Technical Exhibits

The numerous technical exhibits at the 1973 Annual Meeting will feature the latest developments in medical techniques and information. Located in the Bluegrass Convention Center, the exhibits will condense an encyclopedia of ideas, discoveries and up-to-date advances in such a manner that a vast amount of knowledge and information can be secured in a short period of time.

Prepared carefully and skillfully to appeal to you, the physician, the exhibits are especially geared to appeal to your special interests as a practitioner. Medical representatives and other exhibitors will be on hand to discuss personally their products and services with you. Both you and your patients should benefit from the increased knowledge that can be gained from a visit to the Technical Exhibits.

Thirty-minute intermissions have been planned during each general and specialty group session so that every physician may take advantage of this excellent opportunity provided by the exhibits.



**Floor Plan of Technical Exhibits**

## TECHNICAL EXHIBITORS

Abbott Laboratories (22 & 23)  
Ayerst Laboratories (27 & 28)  
Blue Cross, Blue Shield & Delta Dental (11)  
Burroughs Wellcome Co. (20)  
Cal-Med Electronics (7)  
CIBA Pharmaceutical Company (57)  
Commonwealth Life Insurance (60)  
Cooper Laboratories, Inc. (24)  
Crocker-Fels Company (4)  
Dairy Council of the Mid South, Inc. (16)  
Dolbey & Company (61)  
Eaton Laboratories (12)  
Encyclopaedia Britannica, Inc. (53)  
Glencoe Research, Inc. (50)  
Guild of Prescription Opticians of Kentucky (9)  
Hancock, John, Life Insurance Company (39)  
Hoechst Pharmaceuticals, Inc. (8)  
International Clinical Laboratories of Kentucky, Inc. (22)  
Ives Laboratories, Inc. (35)

Lakeside Laboratories, Inc. (56)  
Lederle Laboratories (14)  
Lee, A. P., Agency (17)  
Lilly, Eli & Company (31)  
Lippincott, J. B., Company (21)  
Lorillard (62)  
Malkin Instrument Company (52)  
Marion Laboratories, Inc. (58)  
Mead Johnson Laboratories (51)  
Medical Opinion Research Associates (43)  
Medical Protective Company (1)  
Metropolitan Life Insurance Company—Medicare Office (41)  
Meyer Laboratories, Inc. (19)  
Monarch Auto Company, Inc. (Entrance)  
Mutual Benefit Life Insurance Company (34)  
Office Systems (36)  
Ortho Pharmaceutical Corporation (55)  
Parke, Davis & Company (63)  
Poythress, William P. & Company, Inc. (2)

Professional Accounting Systems Company (30)  
Professional Corporation Benefits Company (54)  
Ransdell Surgical, Inc. (18)  
Revere, Paul, Companies (29)  
Reynolds, R. J., Tobacco Company (5)  
Richards Manufacturing Company (47)  
Robins, A. H., Company (33)  
Sandoz Pharmaceuticals (6)  
Saunders, W. B., Company (37)  
Schering Corporation (32)  
Scroggins, Clayton L., Associates (13)  
Searle Laboratories (31)  
Sheryl Pharmaceuticals, Inc. (49)  
Squibb, E. R. & Sons, Inc. (46)  
Stuart Pharmaceuticals, Div. ICI America, Inc. (10)  
Wacher, Max, & Son, Company (15)  
Wyeth Laboratories (42)  
Zimmer Kloenne of Kentucky, Inc. (40)



I'M ON MY WAY

TO



LEGISLATION

NUTRITION

# CONVENTION

SEPTEMBER 17, 18, 19, 1973  
RAMADA INN  
HURSTBOURNE LANE  
LOUISVILLE

REGISTRATION IN THE LOBBY

SAFETY

McDOWELL HOUSE

JOIN US 8:00-9:15 a.m.  
18th and 19th  
TUESDAY AND WEDNESDAY



COFFEE POOLSIDE

WELCOME

IHA

PRESIDENTS-ELECT  
RECEPTION

5:30-7:00 pm Tuesday 18th

ROBERT H. HENRY U.S.P.  
"GIVE IT TO THE ELEPHANTS"

KMA PRESIDENT'S LUNCHEON  
WEDNESDAY 19TH 11:50 AM

## Fashion Show



FABULOUS FURS

12:15 pm  
Tuesday 18th  
HOLIDAY INN N.E.

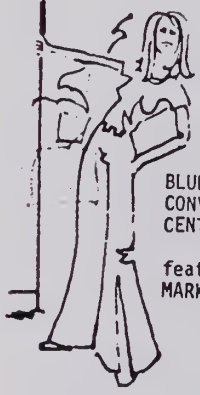
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YUDOFISKY

MONDAY 18th 6:00 pm

KEMPAC  
SEMINAR



BLUEGRASS  
CONVENTION  
CENTER

featuring  
MARK RUSSELL

A MEETIN' !!!  
TUESDAY 18TH 9:30 AM  
WA KMA BUSINESS SESSION  
LOUISVILLE ROOM

WHO ME ???

LEADERSHIP  
CONFERENCE  
9:00 am  
Wednesday 19th

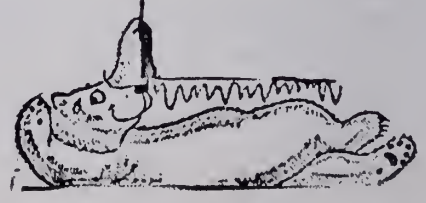
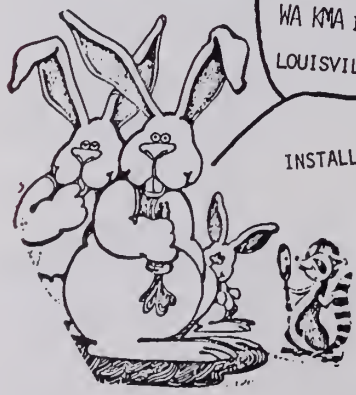
BLUEGRASS NEWS

INSTALLATION

HEALTH  
CITATION  
AWARD  
WINNER

AMA ERF

HEALTH  
CAREERS







## ORGANIZATION SECTION



### AMA Considers 263 Items At 122nd Annual Session

The AMA House of Delegates took action on a record number of business items at its 122nd Annual Convention held June 24-28 in New York City. The Convention, which attracted 8,756 physicians, included a total of almost 19 hours of business sessions of the House of Delegates, where 84 reports and 179 resolutions were considered.

Malcolm C. Todd, M.D., a 60-year-old surgeon from Long Beach, Calif., was chosen President-Elect. Doctor Todd, a member of the AMA House of Delegates, is a past President of the California Medical Association and has served as Chairman of the AMA Council on Health Manpower since 1971. A 1938 graduate of Northwestern University College of Medicine, he is now Associate Clinical Professor of Surgery at the University of California College of Medicine.

Installed as AMA President was Russell B. Roth, M.D., Erie, Pa. Doctor Roth stressed, in his inaugural address, the need for unity and collective action in organized medicine.

Items acted on by the House included reaffirmation of a cooperative leadership in the development of PSRO's with added efforts to repeal the legislation, opposition to the extension of institutional licensure in lieu of individual professional licensure to physicians and nurses and a call for improved education programs capable of producing more primary care physicians.

Other physicians elected or re-elected to Association positions were: Vice-President, E. Bryce Robinson, Jr., M.D., Ala.; Speaker of the House, Tom E. Nesbitt, M.D., Tenn.; Vice-Speaker, William Y. Rial, M.D., Pa.; Trustees, John H. Budd, M.D., Ohio; Richard E. Palmer, M.D., Va.; James H. Sammons, M.D., Texas, and Kenneth C. Sawyer, M.D., Colo.

### Sapling of Famed Tree Presented to KMA

A young tree grown from the seed of the Tree of Hippocrates, which is located on the Greek Island of Cos, was presented to the Kentucky Medical Association on June 13.

Donated by Schering Corporation, the sapling was one of several purchased by the firm, to provide funding of an international medical foundation on the Island of Cos, where Hippocrates is said to have taught his students.

The Tree of Hippocrates, reputed to be over 2400



Robert G. Cox (right), Executive Director of KMA, accepts, on behalf of the Association, a sapling donated by Schering Corporation. Chris Lemke (left), area representative and James Sallee (center), area manager, present the tree, which was grown from a seed from the Tree of Hippocrates.

years old, is 46 feet in circumference and has to be supported by wooden and granite pillars. Each year the giant tree, said to be a plane or sycamore, sheds thousands of tiny seeds. Researchers only recently have been able to grow trees from these seeds.

The tree will remain inside the KMA Headquarters Office until it is large enough to transplant outside.

### Nurses' Training Program To Be Held in Ashland

The King's Daughters Hospital of Ashland has announced that the Seventh Intensive Coronary Care Nurses' Training Program will be held October 1-27, 1973. This four-week course is to be under the direction of H. B. McWhorter, M.D., Coronary Care Unit Director of the Hospital.

Maximum enrollment for the course is limited to 25 nurses; tuition is \$150.00. The class schedule and detailed curriculum are available from Betty Carr, R.N., C.C.U. Supervisor, King's Daughters Hospital, 2201 Lexington Avenue, Ashland, Kentucky 41101.

The Medical Advisory Committee of the Kentucky Society for the Prevention of Blindness will hold its annual breakfast meeting during the KMA Annual Meeting. All members are invited to meet in the Louisville Room of Ramada Inn at 7:30 a.m. on Wednesday, September 19.

## Annual Emergency Care Seminar Attracts 200 Participants

Registration figures exceeded 200 for the Annual Nurses Seminar on Emergency Health Care held June 14 and 15 at the Bluegrass Convention Center in Louisville.



Pictured above are two guest speakers as they addressed the group during a dinner session on June 14. They are David R. Boyd, M.D. and Teresa L. Romano, R.N., both of the Division of Emergency Services and Highway Safety of the Illinois Public Health Department.

Faculty members of the University of Louisville and University of Kentucky medical schools and specialists from Kentucky also participated on the program which attracted nurses and other health professionals from emergency rooms, intensive and coronary care units, operating and recovery rooms, schools and industries from Kentucky and several nearby states.

Sponsors of the annual event are the Kentucky Medical Association, the Kentucky Hospital Association and the Kentucky Nurses Association.

## Former Louisville Physician To Assume U.L. Deanship

Arthur H. Keeney, M.D., ophthalmologist-in-chief at the Wills Eye Hospital in Philadelphia, was named Dean of the University of Louisville School of Medicine by the University's trustees on July 16.



Doctor Keeney

Doctor Keeney, a former Director of Ophthalmology Research at U of L, will assume his position as the 17th dean of the School on September 1. He will succeed Douglas M. Haynes, M.D. who resigned as Dean last year. Richard Swigart, Ph.D. has served

as interim dean since that time.

A 1944 graduate of the U of L School of Medicine, Doctor Keeney was recently presented the Lucien Howe Award for Ophthalmology for his work at Wills Eye Hospital where he has been since leaving Louisville in 1965. A past President of the Kentucky EEN&T Society and the American Association for Automotive Medicine, Doctor Keeney was also active in the affairs of KMA, belonging to several committees. He served for several years as Chairman of the KMA Highway Safety Committee.

## Fall Golf Tournament Planned for September 20 by KMGA

The Kentucky Medical Golf Association will hold its annual fall tournament on Thursday, September 20, at the Harmony Landing Country Club, Louisville.

Members of KMGA may tee off anytime on that day and a limited number of members may play on an alternate date by making arrangements with the golf pro at the Country Club at 228-8316.

A cocktail buffet and business meeting will be held at the Club at 6 p.m. on September 20. Assessment for the tournament is \$25.00, which includes use of an electric golf cart.

Any physician interested in joining KMGA and playing in the fall tournament should complete the following form:

---

### MEMBERSHIP APPLICATION

To: Kentucky Medical Golf Association  
John M. Karibo, M.D., Secretary-Treasurer  
1000 Medical Arts Building  
Louisville, Kentucky 40217

Date \_\_\_\_\_

Gentlemen:

Please enroll me as a member of KMGA. Enclosed is my check in the amount of \$10.00 to cover enrollment and annual dues for 1973. I am enclosing \$25.00 for assessment for the 1973 Tournament. (Make check payable to Kentucky Medical Golf Association.)


Name \_\_\_\_\_ M.D. Date of Birth \_\_\_\_\_

Address \_\_\_\_\_ Club Affiliation \_\_\_\_\_

Current Handicap \_\_\_\_\_

Zip Code \_\_\_\_\_





The diabetic  
who has  
too much...

too much sugar,  
too much fat.

Maybe the last thing she needs is more of her own insulin. Especially when you consider that many overweight diabetics already have normal or high levels of endogenous insulin and that insulin is lipogenic.

If she just won't diet and oral therapy is indicated in adult-onset, nonketotic diabetes...

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lowers blood sugar without raising  
blood insulin.

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DBI-TD® phenformin HCl  
Delayed-Disintegration  
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**Indications:** Stable adult diabetes mellitus; sulfonylurea failures, primary and secondary; adjunct to insulin therapy of unstable diabetes mellitus.

**Contraindications:** Diabetes mellitus that can be regulated by diet alone; juvenile diabetes mellitus if it is uncomplicated and well regulated on insulin; acute complications of diabetes mellitus (metabolic acidosis, coma, infection, gangrene); pregnancy or immediately after surgery where insulin is indispensable; severe hepatic disease; renal disease with uremia; cardiovascular collapse (shock); other disease states associated with hypoxemia.

**Warnings:** Use during pregnancy is to be avoided.

**Precautions:** 1. Starvation Ketosis: This must be differentiated from "insulin lack" ketosis and is characterized by ketonuria which, in spite of rel-

atively normal blood and urine sugar, may result from excessive phenformin therapy, excessive insulin reduction, or insufficient carbohydrate intake. Adjust insulin dosage, lower phenformin dosage, or supply carbohydrates to alleviate this state. Do not give insulin without first checking blood and urine sugar.

2. Lactic Acidosis: This drug is not recommended in the presence of azotemia or in any clinical situation that predisposes to sustained hypotension that could lead to lactic acidosis. To differentiate lactic acidosis from ketoacidosis, periodic determinations of ketones in the blood and urine should be made in diabetics previously stabilized on phenformin, or phenformin and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH, and the lactate-pyruvate ratio. The drug should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis.

3. Hypoglycemia: Although hypoglycemic reactions are rare when phenformin is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with phenformin.

**Adverse Reactions:** Principally gastrointestinal; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, the drug should be immediately withdrawn. Although rare, urticaria has been reported, as have gastrointestinal symptoms such as anorexia, nausea and vomiting following excessive alcohol intake. (B) 98-146-103-E (6/72)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals  
Division of CIBA-GEIGY Corporation  
Ardsley, New York 10502

# "Prescription drugs – who should determine the maker?"

## Dispenser of Medicine

Clifton J. Latiolais  
President  
American  
Pharmaceutical  
Association



## Maker of Medicine

C. Joseph Stetler  
President  
Pharmaceutical  
Manufacturers  
Association



"Too many doctors are indifferent to the economic consequences of their decisions." So stated a recent issue of *Medical News Report* (December 4, 1972), an independent weekly newsletter published by former AMA Chief Executive F. J. L. Blasingame, M.D.

### Doctor, are you indifferent...?

In discussing an anticipated increase in Blue Shield rates, Dr. Blasingame's newsletter had this to say:

"In general, it can be said, MDs have given the impression they are not particularly concerned with the increase in cost of health care to their patients..."

"True, an MD's training is primarily scientific, but in the real world of practice, all of his scientific decisions have a price tag, or an economic impact. The economics of health care beckon the practitioner's attention. Concern for economics of medicine

When the pharmacist recommends that a drug product other than the one ordered be dispensed, the prescriber invariably permits the change when he feels the best interests of the patient will be served.

### Shortcomings of Pro-Substitution Argument

The fact remains that it is necessary for the prescriber to know that the change is being contemplated and to be in a position to consent or demur. Without that opportunity, the unilateral decision of the pharmacist made in the absence of clinical knowledge of the patient, could expose him to needless risks, and in addition, jeopardize the relationship between the professions of Pharmacy and Medicine. In my view, there is nothing in the pro-substitution argument that offsets these risks.

### The Issue of Drug Knowledge

Substitution advocates claim that the primary justification for changing the rules is the desire to better utilize pharmacists' knowledge about drugs. Yet the pharmacist's task to keep current on the entire field of drug therapy, to some degree puts him at a disadvantage. Most often, a practicing physician will not have expert knowledge of no more than



ould be an obligation of medical practice...

"Medical societies ought to conduct continuing campaigns to point out the substantial savings that could be realized thru deductible insurance and protection for catastrophic illness. At the very least, they should, in the patients' interest, question the practices of any insurance organization that raises health care costs by forcing policyholders to buy insurance they may not need or want and probably won't ever use.

"Too many doctors are indifferent to the economic consequences of their decisions. Too many, for example, habitually hospitalize patients for the convenience of the MD. It's nonsense to deny such habits exist...

"Doctors, thru their medical societies, have unhesitatingly appealed to their patients for support in the fight against government interference with the private practice of medicine. And the public in the past has responded. It's time the American Medical Association and state and local medical societies paid off the debt by decisive action to hold down the cost of medical care."

#### Cost of Drugs

Insurance rates and hospital charges are only two factors in health

care costs. The cost of drugs—both prescription and nonprescription—is another.

And when it comes to drug costs, the nation's pharmacists are concerned. Through their national professional society, the American Pharmaceutical Association, pharmacists are advising the public to use nonprescription medication cautiously and conservatively, and to seek the advice of their pharmacist before selecting or purchasing such drugs.

#### Outdated Laws

The pharmacist also is aware that when it comes to prescription drugs, often he has an even greater opportunity to reduce the cost to the patient—with no sacrifice in the quality of the medication dispensed. But in many states, outdated and antiquated laws prevent the pharmacist from engaging in drug product selection. "Drug product selection" simply means that the pharmacist functions in the patient's interest by consciously choosing, from the multiple brands available, a low-cost quality brand of the specific drug to be dispensed in response to the physician's prescription order.

Much *misinformation* has been purposely spread by those who stand to gain financially by maintaining

high drug costs to the public. An endless stream of propaganda has emanated from the drug industry in an effort to persuade the medical profession that these so-called anti-substitution laws should be retained. And as long as these laws are retained, the drug industry will continue its current marketing practices which contribute unnecessarily to high drug costs to patients. These practices also are inviting government agencies to expand their restrictive controls on physicians and pharmacists.

#### APhA Efforts

As pharmacists, we are concerned about health care costs. We hope that every physician shares our concern on this vital issue, and will give his personal support to the constructive efforts APhA has undertaken in the interest of all patients.

(For a complete discussion of drug product selection, you are invited to request a free copy of the "White Paper on the Pharmacist's Role in Product Selection" from: American Pharmaceutical Association, 2215 Constitution Avenue, N.W., Washington, D.C. 20037.)

er 30 drugs that he selects to treat the majority of conditions encountered in his practice. Moreover, the physician's choice of a specific brand is based on his knowledge of the patient's medical history and current condition, and his experiences with the particular manufacturer's product.

Some substitution proponents have argued that the dispensing of a prescription is a simple two-party transaction between the pharmacist and the patient, and that a substituting pharmacist may avoid even a technical breach of contract by simply notifying the patient that he is making the substitution. I would judge that few courts would be sympathetic toward a pharmacist who substituted without physician approval and who undertook a legal defense that seeks to make the patient responsible for the pharmacist's actions.

#### Reduced Prescription Prices?

Substitution advocates are suggesting to the consumer, and particularly the consumer activist, that reduced prescription prices could allow legalization of substitution. We have seen absolutely no evidence to justify this claim. To the contrary, experience in Alberta, Canada, where substitution is authorized, suggests

the opposite.

Many pharmacists understandably are concerned about the cost of maintaining multiple stocks of similar products. While there is no doubt that inventory costs rise when additional brands are stocked, it would be interesting to know how much they rise, and how many pharmacists actually stock *all* brands—of, say, ampicillin or tetracycline—or how long they keep "slow moving" products on their shelves before they are returned for credit. To ask that the industry eliminate multiple sources is to ask competitors to stop competing.

#### Drug Substitution—A License for the Unethical

Anti-substitution repeal would favor "corner cutting" pharmacists and manufacturers. For them, free substitution would be not a right, but a license. As an aftermath, it is quite likely that the confidence of both physicians and patients in the profession of Pharmacy would be eroded, as revelations about the unconscionable behavior of an undisciplined few were magnified in the press or in professional circles.

#### Summary

In short, what the American Pharmaceutical Association advo-

cates as a broad-spectrum panacea looks to us to be not only a minority view (advocacy of substitution is by no means a uniform policy in Pharmacy), but also an extraordinarily costly and ineffective remedy, whose side effects are odious. We believe (1) that an impressive majority of pharmacists prefer to work with Medicine and with industry, for the consumer, and for the general good, (2) that they seek the privilege to substitute when the patient might gain and when the patient's doctor agrees, and (3) that they seek to work for the resolution of genuine grievances openly and professionally.

(For amplification of PMA views, please write for our booklet, "The Medications Physicians Prescribe: Who Shall Determine the Source?" It is available from: Pharmaceutical Manufacturers Association, 1155 Fifteenth Street, N.W., Washington, D.C. 20005.)

Pharmaceutical  
Manufacturers Association  
1155 Fifteenth Street, N.W.  
Washington, D.C. 20005



## In Memoriam

**ADAM STACY, JR., M.D.**  
Pineville  
1909-1973

Adam Stacy, Jr., M.D., of Pineville, died on April 23 at the age of 64. A 1932 graduate of the University of Louisville School of Medicine, Doctor Stacy was a surgeon. He belonged to the Bell County Medical Society, as well as the Kentucky and American Medical Associations.

**RONALD L. SERGENT, M.D.**  
Lexington  
1932-1973

Ronald Lee Sergent, M.D., 40, died on May 22 in an automobile accident. Specializing in internal medicine, Doctor Sergent was a 1958 graduate of the Vanderbilt University School of Medicine. He was a member of the Fayette County Medical Society, the Kentucky and American Medical Associations.

**OLIVER P. MILLER, M.D.**  
Columbia  
1893-1973

Oliver P. Miller, M.D., died on May 31 at the age of 80. A former chief medical officer of the Veterans Hospital in Lexington, as well as a former chief medical officer of the Veterans Administration regional office in Louisville, Doctor Miller was a 1916 University of Louisville School of Medicine graduate. He has been an emeritus member of the Kentucky and American Medical Associations for many years.

**W. MOUNTJOY SAVAGE, M.D.**  
Murray  
1909-1973

W. Mountjoy Savage, M.D., a surgeon from Murray, died on May 23, 1973 at the age of 64. A 1937 graduate of the University of Louisville School of Medicine, Doctor Savage was a member of the Calloway County Medical Society and the Kentucky and American Medical Associations.

**JOHN C. BAKER, M.D.**  
Berea  
1900-1973

John C. Baker, M.D., died on June 25 at the age of 73. A general practitioner, Doctor Baker was a 1928 graduate of the University of Tennessee College of Medicine. He belonged to the Madison County Medical Society and Kentucky Medical Association.

**DAVID G. MILLER, JR., M.D.**  
Morgantown  
1908-1973

David G. Miller, Jr., M.D., Morgantown, died July 14. A general practitioner, Doctor Miller was extremely active in the Kentucky Chapter of the American Academy of Family Physicians, being its first President in 1947-48 and later serving as Secretary-Treasurer for many years. A 1935 graduate of the Vanderbilt University School of Medicine, Doctor Miller was the 1969 recipient of the KMA "Outstanding General Practitioner Award."

### Methadone Guidelines Available

The Food and Drug Administration in cooperation with the AMA Committee on Alcoholism and Drug Dependence of the Council on Mental Health has prepared a set of questions and answers concerning new federal regulations of methadone. These guidelines are available through the KMA Office in the event a physician is interested in sponsoring or affiliating with methadone treatment programs.

### Take This Issue Home To Your Wife

Lee C. Hess, M.D., Florence, KMA President, urges you to take this issue of *The Journal* home for your wife to read. Many activities planned during the Annual Meeting will be of interest to her. The program for the Annual Convention of the Woman's Auxiliary to KMA is on page 536.

### Call For Physician

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Box 323, Eddyville, Kentucky 42038*





## IN THE BOOKS



**CARDIOVASCULAR PHYSIOLOGY** by Robert M. Berne, M.D. and Matthew N. Levy, M.D.; Published by The C. V. Mosby Company, St. Louis, 1972; 253 pages, illustrated; Price \$9.25.

In this book the authors achieve their stated purpose, to emphasize general concepts in cardiovascular physiology. Only normal physiology is discussed and no attempt is made to cover minute details or pathologic physiology. Throughout the book well chosen emphasis is given to control mechanisms which regulate normal cardiovascular events. In general, the descriptions are concise, yet thorough enough to be of real value to the medical student, house officer and practicing physician.

The chapters on electrical activity of the heart, the peripheral circulation and its regulation, and control of the heart deserve special mention. In these chapters the authors have successfully converted complex subjects into concise, easy to understand descriptions and illustrations. Material contained in these sections is up to date and can readily be applied to bedside evaluation of patients.

The chapter on the cardiac pump is too brief in view of the overall importance of this subject. The discussions and diagrams on the arterial system are complex and a solid background in physics is necessary for complete comprehension. However, the microcirculation is extremely well written and illustrated.

Minor changes in their section on coronary circulation with more emphasis on determinants of coronary flow could make this section more applicable to clinical medicine. Likewise, discussion of the pulmonary circulation could be a useful addition to the chapter on special circulations.

In summary, this book represents a concise and reasonably thorough review of the general principles of normal cardiovascular physiology. In their final chapter the basic control mechanisms involved in cardiovascular hemodynamics are well exemplified with changes that occur with exercise and with hemorrhage. An appreciation of its contents does require background knowledge in human anatomy and physiology.

ROBERT R. GOODIN, M.D., LOUISVILLE

**RENAL DISEASE IN CHILDHOOD** by John A. James, M.D.; Published by The C. V. Mosby Company, St. Louis, 1972; 377 pages; illustrated; Price \$23.50.

This book contains a most practical approach to the understanding of pediatric nephro-urology. A tremendous wealth of material is presented in a concise and comprehensive manner. The strongest point of the book is that the urinary tract is taken as a whole unit rather than having the importance

of renal parenchymal diseases considered in isolation.

Normal anatomy and physiology is presented in one chapter in a practical manner. The chapter on urinary tract infections, the most commonly encountered problem, is well written. Renal parenchymal diseases and renal failure, together with current means of therapy, are described in detail.

The references, for those who like to pursue the problems further, are extensive and up-to-date.

This book will prove to be useful reading for all clinicians who take care of urinary problems in children. It will be a worthwhile addition to any physician's library.

MOHAMMAD AMIN, M.D., LOUISVILLE

**CURRENT CONCEPTS IN RADIOLOGY**, edited by E. James Potchen, M.D.; Published by The C. V. Mosby Company, St. Louis, 1972; 346 pages, illustrated; Price \$24.75.

This book is dedicated to radiologists-in-training. It should be of particular interest to this group. However, the rapidly advancing field of radiology makes the group of radiologists-in-training all inclusive.

The collection of papers is exactly what the title implies. There are articles on most of the current subjects of interests that are undergoing change. This includes diagnostic x-ray and organ imaging with radioisotopes. The greatest emphasis is upon the chest. There are large sections on the lung and the heart.

One especially well written section is the title "Pulmonary patterns—the concept of alveolar and interstitial disease". This is a presentation of basic material on a new concept of pulmonary interpretation. This should revise the old system of memorizing certain patterns as characteristic for specific disease. It proposes the analysis of shadows and the classification as alveolar or interstitial in proving anatomic-pathologic correlation.

Another excellent chapter is that on "Radiologic aspects of pulmonary mechanics". This deals with principles of interpretation built around the mechanics of fluctuating chest expansion, the varying blood flow, and the varying intrathoracic pressure.

There is an excellent section on "Factors limiting roentgen interpretation—physical and physiologic". This includes interesting studies of the limitations in visual interpretations. This knowledge should be, but probably is not, common to those of us who spend so much of our time in visual interpretation.

This book certainly is of interest to radiologists in whatever state of training and experience. It should also appeal to others interested in roentgen interpretation of the chest.

ORSON P. SMITH, JR., M.D., LOUISVILLE

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Louisville, Kentucky 40202*

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**EARLY**

**KMA Annual Meeting**

**September 18-20**

**Ramada Inn/Bluegrass Convention Center**

**Louisville**

### Office Available

Office of established physician in Lexington, Kentucky, will be available August. Situated in Good Samaritan Hospital neighborhood. Will rent furnished or unfurnished. Office is air-conditioned. For further information, call (606) 233-1942, on Wednesdays or Saturdays.



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You get a package of personal and professional services and benefits you've probably never been fully aware of.

You get insurance programs at a cost considerably lower than those purchased on an individual basis. A \$250,000 Excess Major Medical Policy. Group Life. Disability Income Insurance. Professional Liability Insurance (in co-sponsorship with your state society.) Then there's the AMA Members Retirement Fund.

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# ROCHE announces new

# BACTRIM<sup>TM</sup>

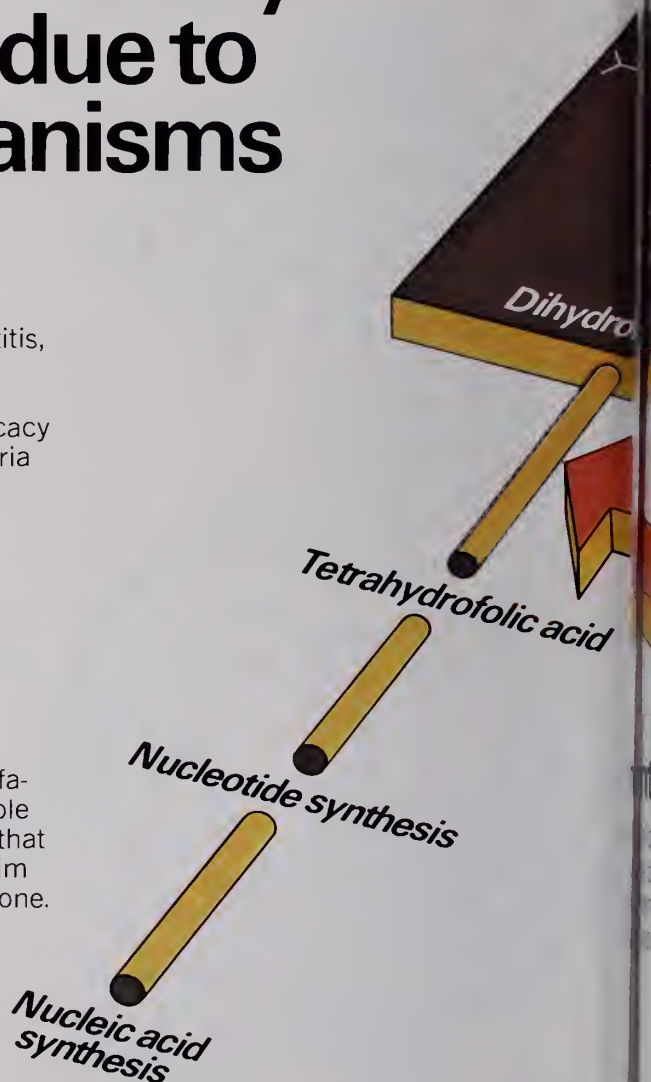
Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

## a new type of antibacterial for a two-pronged attack against chronic urinary tract infections due to susceptible organisms

Bactrim is highly effective in the treatment of these infections — primarily pyelonephritis, pyelitis and cystitis, when due to susceptible organisms (usually *E. coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, and, less frequently, indole-positive proteus species). This efficacy is related to the unique mode of action against bacteria (see opposite page), an action that, in effect, makes Bactrim a new type of antibacterial.

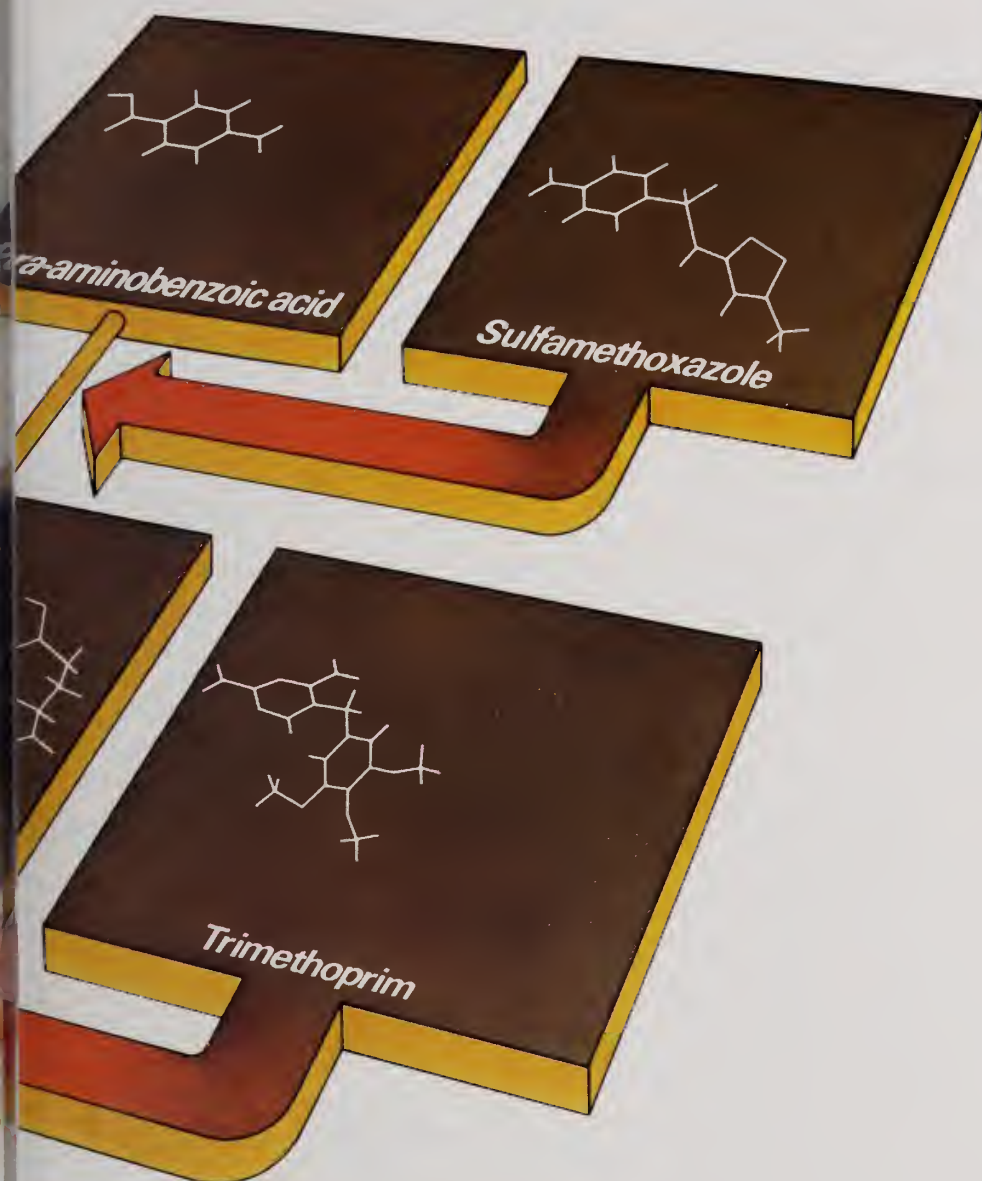
### Bactrim significantly superior to constituents in patients with obstructive complications

In the presence of obstructive uropathy, Bactrim has demonstrated efficacy which is superior to either sulfamethoxazole or trimethoprim alone against susceptible organisms. In addition, *in vitro*\* studies have shown that bacterial resistance develops more slowly with Bactrim than with either trimethoprim or sulfamethoxazole alone.



\*Please note that clinical conclusions cannot be extrapolated from *in vitro* studies.





## Interrupts life cycle of susceptible bacteria

Unique mode of action interrupts the life cycle at two important points, thereby impeding the production of nucleic acids and proteins essential to these bacteria. These consecutive interruptions occur because sulfamethoxazole and trimethoprim resemble naturally existing substrates. By competitive replacement of these substrates, they inhibit further synthesis.

new **BACTRIM**<sup>TM</sup>

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

**for chronic urinary tract infections**

Before prescribing, please see complete product information on last page of advertisement.

## Excellent clinical response in chronic urinary tract infections

A multiclinic, double-blind study\* of response to a ten-day course of therapy in 471† patients with chronic urinary tract infections demonstrated the superiority of Bactrim. On the 10th day after initiation of therapy, 91.7% (of 168 patients) showed significant bacteriological response to Bactrim compared with 81.2% (of 144 patients) to trimethoprim and 64.5% (of 155 patients) to sulfamethoxazole. In patients with obstructive complications, 10th day response was 94.8% (of 97 patients) to Bactrim, 72.9% (of 85 patients) to trimethoprim and 58.5% (of 94 patients) to sulfamethoxazole.

## Excellent response maintained

Bactrim proved equally impressive in maintaining this bacteriological response. In the above study, after ten-day therapy with Bactrim, 68.4% of patients with chronic urinary tract infections maintained response for up to 42 consecutive days, compared with 59.7% with trimethoprim and 44.4% with sulfamethoxazole. In patients with obstruction, 70.8% of those on Bactrim maintained response for up to 42 consecutive days, compared

with 49.4% on trimethoprim and 38.8% on sulfamethoxazole. The figures are particularly remarkable in cases with urinary obstruction—cases regarded as being notoriously difficult to treat.

## To date, low incidence of significant side effects

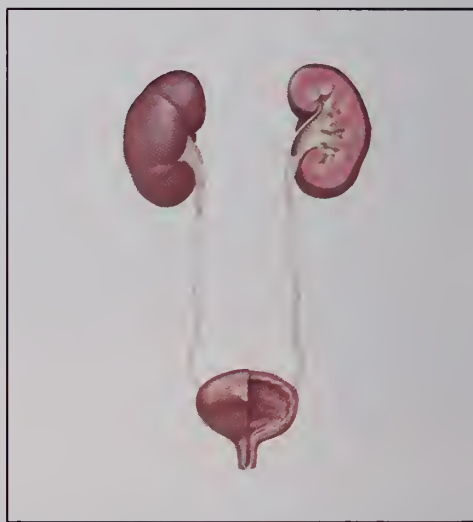
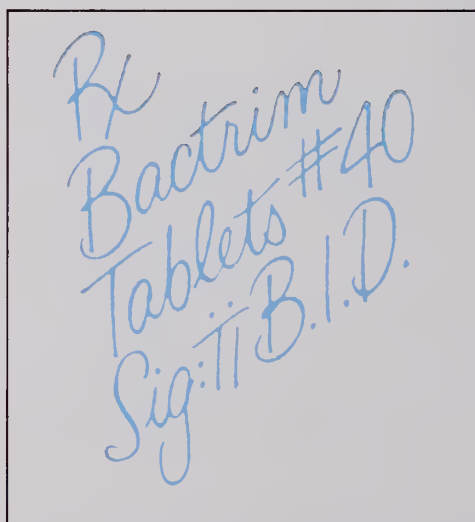
Although Bactrim demonstrated impressive clinical results, it is important to note that the incidence of clinically significant adverse effects was low, mainly nausea and/or vomiting, rash, leukopenia, SGOT increase and creatinine increase.

Bactrim should be given with caution to patients with impaired renal or hepatic function, possible folate deficiency and to those with severe allergy bronchial asthma. Adequate fluid intake must be maintained. Complete blood counts, urinalyses with careful microscopic examination, and renal function tests should be performed during therapy.

Currently, the increasing frequency of resistant organisms is a limitation of the usefulness of all antibacterial agents, especially in the treatment of chronic and recurrent urinary tract infections.

**Usual adult dosage: two tablets every twelve hours for 10 to 14 days; no loading dose required.**

\* Data on file, Hoffmann-La Roche Inc., Nutley, N.J. 07111  
† 4 patients not available for evaluation at day 10.



**new BACTRIM™**

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

**for chronic urinary tract infections**



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110

Before prescribing, please consult complete product information on facing page.



**Complete Product Information:**

**Description:** Bactrim is a synthetic antibacterial combination product, available in scored light-green tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole.

Trimethoprim is 2,4-diamino-5-(3,4,5-trimethoxybenzyl) pyrimidine, a white to light-yellow, odorless, bitter compound with a molecular weight of 290.3.

Sulfamethoxazole is *N*-(5-methyl-3-isoxazolyl)sulfanilamide. It is almost white in color, odorless, tasteless compound with a molecular weight of 253.28.

**Actions: Microbiology:** Sulfamethoxazole inhibits bacterial synthesis of dihydrofolic acid by competing with para-aminobenzoic acid. Trimethoprim blocks the production of tetrahydrofolic acid from dihydrofolic acid by binding to and reversibly inhibiting the required enzyme, dihydrofolate reductase. Thus, Bactrim blocks two consecutive steps in the biosynthesis of nucleic acids and proteins essential to many bacteria.

**In vitro** studies have shown that bacterial resistance develops more slowly with Bactrim than with trimethoprim or sulfamethoxazole alone.

**In vitro** serial dilution tests have shown that the spectrum of antimicrobial activity of Bactrim includes the common urinary tract pathogens with the exception of *Pseudomonas aeruginosa*. The following organisms are usually susceptible: *Escherichia coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis* and indole-positive proteus species.

Representative Minimum Inhibitory Concentration Values for Bactrim-Susceptible Organisms (MIC—mcg/ml)				
Organism	Trimethoprim alone	Sulfamethoxazole alone	TMP/SMX (1:20)	
			TMP	SMX
<i>Escherichia coli</i>	0.05—1.5	1.0 —245	0.05—0.5	0.95— 9.5
<i>Proteus</i> spp.	0.5 —5.0	7.35 —300	0.05—1.5	0.95—28.5
<i>Indole positive proteus</i>	0.5 —1.5	7.35 — 30	0.05—0.15	0.95— 2.85
<i>Klebsiella-Enterobacter</i>	0.15—5.0	0.735—245	0.05—1.5	0.95—28.5

**Human Pharmacology:** Bactrim is rapidly absorbed following oral administration. The blood levels of trimethoprim and sulfamethoxazole are similar to those achieved when each component is given alone. Peak blood levels for the individual components occur one to four hours after oral administration. The half-lives of sulfamethoxazole and trimethoprim, 10 and 16 hours respectively, are relatively the same regardless of whether these compounds are administered as individual components or as Bactrim. Detectable amounts of trimethoprim and sulfamethoxazole are present in the blood 24 hours after drug administration. Free sulfamethoxazole and trimethoprim blood levels are proportionately dose-dependent. With repeated administration, the steady-state ratio of trimethoprim to sulfamethoxazole levels in the blood is about 1:20.

Sulfamethoxazole exists in the blood as free, conjugated and protein-bound forms; trimethoprim is present as free, protein-bound and metabolized forms. The free forms are considered to be the biologically active forms. Approximately 44 percent of trimethoprim and 70 percent of sulfamethoxazole are protein-bound in the blood. The presence of 10 mg percent sulfamethoxazole in plasma increases the protein binding of trimethoprim to an insignificant degree; trimethoprim does not influence the protein binding of sulfamethoxazole.

Excretion of Bactrim is chiefly by the kidneys through both glomerular filtration and tubular secretion. Urine concentrations of both sulfamethoxazole and trimethoprim are considerably higher than the concentrations in the blood. When administered together in Bactrim, neither sulfamethoxazole nor trimethoprim affects the urinary excretion pattern of the other.

**Indications:** Chronic urinary tract infections (primarily pyelonephritis and cystitis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, and, less frequently, indole-positive proteus species).

**Important note:** Currently, the increasing frequency of resistant organisms is a limitation of the usefulness of all antibacterial agents, especially in the treatment of chronic and recurrent urinary tract infections.

**Contraindications:** Hypersensitivity to trimethoprim or sulfonamides. Pregnancy and during the nursing period (see Reproduction Studies).

**Warnings:** Deaths associated with the administration of sulfonamides have been reported from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias. Experience with trimethoprim alone is much more limited, but it has been reported to interfere with hematopoiesis in occasional patients. In elderly patients concurrently receiving certain diuretics, primarily thiazides, an increased incidence of thrombopenia with purpura has been reported.

The presence of clinical signs such as sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. Complete blood counts should be done frequently in patients receiving Bactrim. If a significant reduction in the count of any formed blood element is noted, Bactrim should be discontinued.

At the present time, there is insufficient clinical information on the use of Bactrim in infants and children under 12 years of age to recommend its use.

**Precautions:** Bactrim should be given with caution to patients with impaired renal or hepatic function, to those with possible folate deficiency and to those with severe allergy or bronchial asthma. In glucose-6-phosphate dehydrogenase-deficient individuals, hemolysis may occur. This reaction is frequently dose-related. Adequate fluid intake must be maintained in order to prevent crystalluria and stone formation. Urinalyses with careful microscopic examination and renal function tests should be performed during therapy, particularly for those patients with impaired renal function.

**Adverse Reactions:** For completeness, all major reactions to sulfonamides and to trimethoprim are included below, even though they may not have been reported with Bactrim.

**Blood dyscrasias:** Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprolthrombinemia and methemoglobinemia.

**Allergic reactions:** Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis.

**Gastrointestinal reactions:** Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis.

**C.N.S. reactions:** Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness.

**Miscellaneous reactions:** Drug fever, chills, and toxic nephrosis with oliguria and anuria. Periarteritis nodosa and L. E. phenomenon have occurred.

The sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the thiazides) and oral hypoglycemic agents. Goiter production, diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. Cross-sensitivity may exist with these agents. Rats appear to be especially susceptible to the goitrogenic effects of sulfonamides, and long-term administration has produced thyroid malignancies in the species.

**Dosage and Administration:** Not recommended for use in children under 12 years of age.

The usual adult dosage is two tablets every 12 hours for 10 to 14 days.

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	2 tablets every 24 hours
Below 15	Use not recommended

**How Supplied:** Tablets, containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 1000; Prescription Paks of 40, available singly and in trays of 10. Imprint on tablets: ROCHE 50.

**Reproduction Studies:** In rats, doses of 533 mg/kg sulfamethoxazole or 200 mg/kg trimethoprim produced teratological effects manifested mainly as cleft palates. The highest dose which did not cause cleft palates in rats was 512 mg/kg sulfamethoxazole or 192 mg/kg trimethoprim when administered separately. In two studies in rats, no teratology was observed when 512 mg/kg of sulfamethoxazole was used in combination with 128 mg/kg of trimethoprim. However, in one study, cleft palates were observed in one litter out of 9 when 355 mg/kg of sulfamethoxazole was used in combination with 88 mg/kg of trimethoprim.

In rabbits, trimethoprim administered by intubation from days 8 to 16 of pregnancy at dosages up to 500 mg/kg resulted in higher incidences of dead and resorbed fetuses, particularly at 500 mg/kg. However, there were no significant drug-related teratological effects.



**BACTRIM**™

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.



ROCHE

Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley N.J. 07110

# What's on your patient's face...

may be more important than his chief complaint

Patient P.T.\* seen on 3/29/67 shows typical lesions of moderately severe keratoses. Note residual scarring on ridge of nose from previous cryosurgical and electrosurgical procedures.



Patient P.T.\* seen on 6/12/67, seven weeks after discontinuation of 5% FU cream. Reaction has subsided. Residual scarring not seen except that due to prior surgery. Inflammation has cleared and face is clear of keratotic lesions.

\*Data on file,  
Hoffmann-La Roche  
Inc., Nutley, N.J





**The lesions on his face  
are solar/actinic—  
so-called "senile" keratoses...  
and they may be premalignant.**

### **Solar, actinic or senile keratoses**

These lesions may be called by several names, but they usually can be identified by the following characteristics. The typical lesion is flat or slightly elevated, of a brownish or reddish color, papular, dry, rough, adherent and sharply defined. They commonly occur as multiple lesions, chiefly on the exposed portions of the skin.

### **Sequence of therapy— selectivity of response**

After several days of therapy with Efudex® (fluorouracil), erythema may begin to appear in the area of the lesions; this reaction usually reaches its height of unsightliness and discomfort within two weeks, declining after discontinuation of therapy. This reaction occurs in affected areas. Since the response is so predictable, lesions that do not respond should be biopsied.

### **Acceptable results**

Treatment with Efudex provides highly favorable cosmetic results. Incidence of scarring is low. This is particularly important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Multiple actinic or solar keratoses.

**Contraindications:** Patients with known hypersensitivity to any of its components.

**Warnings:** If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

**Precautions:** If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

**Adverse Reactions:** Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

**Dosage and Administration:** Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

**How Supplied:** Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110

**This patient's lesions were resolved with**

**Efudex®  
fluorouracil/Roche®**

**5% cream/solution...a Roche exclusive**

★  
*Specialized Service*  
IN  
**PROFESSIONAL LIABILITY INSURANCE**  
*is a high mark of distinction*

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**MEDICAL PROTECTIVE COMPANY**  
**FORT WAYNE, INDIANA**

*Professional Protection Exclusively since 1899*

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108 McArthur Drive

NEW ALBANY Professional Arts Bldg., 1919 State Street

BOWLING GREEN 524 East Main Street

OWENSBORO Doctors Bldg., 1001 Center Street



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Optical*

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Master Charge



# Integument!

Our skin—the human integument—covers us, defines us, protects us. But skin is subject to cuts, burns, abrasions. And infections. Neosporin Ointment fights infection by providing broad antibacterial action against susceptible skin invaders. It contains antibiotics that are rarely used systemically, reducing the risk of sensitization.



**INDICATIONS:** *Therapeutically*, used as an adjunct to appropriate systemic therapy for topical infections; primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

*Prophylactically*, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

**CONTRAINDICATIONS:** Not for use in the external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

**PRECAUTION:** As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Complete literature available on request from Professional Services Dept. PML.

## NEOSPORIN<sup>®</sup> Ointment

(POLYMYXIN B-BACITRACIN-NEOMYCIN)

Each gram contains: Aerosporin<sup>®</sup> brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg. (equivalent to 3.5 mg. neomycin base); special white petrolatum q.s. In tubes of 1 oz. and ½ oz. and ¼ oz. (approx.) foil packets.



Wellcome

Burroughs Wellcome Co.  
Research Triangle Park  
North Carolina 27709



## Placidyl® (ETHCHLORVYNOL)

### Brief Summary

**Indications**—Placidyl (ethchlorvynol) is indicated as short-term hypnotic therapy in the management of insomnia.

**Contraindications**—Drug hypersensitivity and porphyria.

**Warnings**—Not recommended during the first and second trimester of pregnancy. Caution patients of possible combined exaggerated effects with alcohol, barbiturates, tranquilizers or other CNS depressants. Exaggerated effects might result in blurring of vision, paralysis of accommodation and profound hypnosis. Caution patients concerning driving a motor vehicle, operating machinery, or other hazardous operations requiring alertness after taking the drug. Administer with caution to patients with suicidal tendencies and do not prescribe large quantities of the drug. Adjustment of the dosage of oral anticoagulants might be necessary when beginning ethchlorvynol therapy, during therapy, or after stopping therapy. This drug is not recommended for use in children. PLACIDYL HAS THE POTENTIAL FOR THE DEVELOPMENT OF PSYCHOLOGICAL AND PHYSICAL DEPENDENCE. INSTANCES OF SEVERE WITHDRAWAL SYMPTOMS, INCLUDING CONVULSIONS AND DELIRIUM CLINICALLY SIMILAR TO THOSE SEEN WITH BARBITURATES, HAVE BEEN REPORTED IN PATIENTS TAKING REGULAR DOSES AS LOW AS 1000 MG. PER DAY OVER A PERIOD OF TIME WHEN THE DRUG WAS SUDDENLY DISCONTINUED. PROLONGED ADMINISTRATION OF THE DRUG IS NOT RECOMMENDED. Addiction-prone patients or those who are likely to increase dosages of the drug on their own initiative should be observed for evidence of signs or symptoms which may indicate possible early withdrawal or abstinence symptoms. Signs and symptoms associated with withdrawal and abstinence include unusual anxiety, tremor, ataxia, slurring of speech, memory loss, perceptual distortions, irritability, agitation and delirium. Other less well defined signs and symptoms, not necessarily due to withdrawal and abstinence, may include anorexia, nausea or vomiting, weakness, dizziness, sweating, muscle twitching and weight loss. Abrupt discontinuance of Placidyl following prolonged overdosage may result in convulsions and delirium.

**Precautions**—Toxic amblyopia has been reported with long-term continuous use of ethchlorvynol. Permanent visual defects have been observed, although amblyopia has improved after discontinuation of the drug. Drug dosage should be limited for elderly and debilitated patients to the smallest effective amount. If pain is present, this drug should only be given if insomnia persists after pain is controlled with analgesics. Caution is advised in prescribing the drug for patients who are being treated with either MAO inhibitors or antidepressants. Transient delirium has been reported with the combination of Placidyl and amitriptyline. Drug dosage should be reduced if prescribed for patients receiving MAO inhibitors or antidepressants. Caution should be exercised in patients with impaired hepatic or renal function. Patients who respond unpredictably to barbiturates or alcohol, or who exhibit excitement and release of inhibition in association with such agents, may also react in this way to Placidyl. Rarely, patients may exhibit symptoms suggestive of an unusual susceptibility to the drug; such as prolonged hypnosis, profound muscular weakness, excitement, hysteria, or syncope without marked hypotension. Transient giddiness or ataxia may occur.

**Adverse Reactions**—Hypotension, nausea or vomiting, gastric upset, aftertaste, blurring of vision, dizziness, facial numbness, and allergic reaction typified by urticaria have been reported following Placidyl administration. Mild "hangover" and symptoms of mild excitation have occurred in some patients. There have been rare reports of cholestatic jaundice occurring in patients taking ethchlorvynol. A few cases of thrombocytopenia have been reported in patients receiving ethchlorvynol. 302430R



## Give us her nights.

Prescribe Placidyl. Chances are, we'll give her a good night's sleep.

Insomnia is often associated with emotional disturbance. Emotional problems might be the cause . . . or the effect. In time that can be determined. But tonight, one fact is painfully clear: she needs sleep.

When sleep is synonymous with therapy, remember . . . Placidyl is synonymous with sleep. It has been for over 17 years.

If time is the criterion to inspire your confidence . . . you can rest assured with Placidyl.

Prescribed by physicians for over 17 years.

**Placidyl®**  
(ETHCHLORVYNOL CAPSULES, 500 or 750 mg.)





# IN ASTHMA IN EMPHYSEMA



*optional  
therapy*



# THE mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications** are listed above. **MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with ½ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

## MUDRANE—original formula

*First choice*

## MUDRANE-2

*When ephedrine is too exciting  
or is contraindicated*

## MUDRANE GG

*During pregnancy or when K.I. is  
contraindicated or not tolerated*

## MUDRANE GG-2

*A counterpart for Mudrane-2*

## MUDRANE GG ELIXIR

*For pediatric use  
or where liquids are preferred*

*Clinical specimens  
available to physicians.*

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

*Manufacturers of Ethical Pharmaceuticals*



# How strong must a tranquilizer be for severe anxiety?

## As strong as Librium® 25 mg (chlordiazepoxide HCl)



The achievement of desired therapeutic results is often a function of the dosage strength as well as the drug's intrinsic action. Thus, when anxiety is *severe*, the 25-mg strength of Librium frequently provides the necessary antianxiety action with a minimum of unwanted adverse reactions. Librium 25 mg is a convenient dosage form for the relief of severe, incapacitating anxiety, specifically formulated to supplement your counsel and reassurance.

### Benefits-to-risks ratio permits higher dosage

For over 13 years, Librium has been recognized for its excellent benefits-to-risks ratio, an asset in the *higher* dosage ranges as in more common clinical applications. Thus, the frequency of dosage with Librium 25 mg can be flexibly adjusted to the needs and response of the individual patient, up to 100 mg daily if required. Total daily dosage for the elderly and debilitated should not exceed 20 mg. When severe anxiety has been reduced, Librium dosage should be correspondingly reduced or discontinued entirely.



basic support  
in severe anxiety  
**Librium® 25 mg**  
(chlordiazepoxide HCl)  
1 capsule t.i.d./q.i.d.



Roche Laboratories  
Division of Hoffmann-La Roche Inc  
Nutley, N.J. 07110

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Relief of anxiety and tension occurring alone or accompanying various disease states.

**Contraindications:** Patients with known hypersensitivity to the drug.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age require that its potential benefits be weighed against its possible hazards.

**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

**Adverse Reactions:** Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

**Supplied:** Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.





# *The Journal of The* **KENTUCKY** *Medical Association*

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KMA 1973 Annual Meeting  
September 18-20  
Bluegrass Convention Center  
Ramada Inn  
Louisville, Kentucky



Everybody experiences psychic tension.



Most people can handle this tension.



Some people develop excessive psychic tension and need your counseling,



and a few may need counseling  
*and* the psychotropic action of Valium® (diazepam).



Before deciding to make Valium (diazepam) part of your treatment plan, check on whether or not the patient is presently taking drugs and, if so, what his response has been. Along with the medical and social history, this information can help you determine initial dosage, the possibility of side effects and the ultimate prospects of success or failure.

While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

**Dosage:** Individualize for maximum beneficial effect.

**Adults:** Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. **Geriatric or debilitated patients:** 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

**Supplied:** Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose® packages of 1000.



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110

# Valium® (diazepam)

To help you manage excessive psychic tension

# The Rx that says "Relax"



**BUTISOL Sodium provides highly predictable sedative effect:** minor dosage adjustments are usually all that's needed to produce the desired degree of sedation. (With 3 dosage forms and 4 strengths to make adjustments easy.)

**BUTISOL Sodium offers prompt, smooth, relatively non-cumulative action:** begins to work within 30 minutes... yet, because of its intermediate rate of metabolism, generally has neither a "roller-coaster" nor a "hangover" effect.

**BUTISOL Sodium is remarkably well tolerated:** a 30-year safety record assures you that there is little likelihood of unexpected reactions.

**BUTISOL Sodium saves your patients money:** costs less than half as much as most commonly prescribed sedative tranquilizers.\*

These are four good reasons for prescribing BUTISOL Sodium for the many patients who need to have the pace set just a little slower. Its gentle daytime sedative action is often all that's needed to help the usually well-adjusted patient cope with temporary stress.

\*Based on surveys of average daily prescription costs.

**Butisol** SODIUM  
(SODIUM BUTABARBITAL)

**Contraindications:** Porphyria, sensitivity to barbiturates, or susceptibility to dependence on sedative-hypnotics. **Warning:** May be habit forming.

**Precautions:** Exercise caution in: moderate to severe hepatic disease; withdrawal in drug dependence or the taking of excessive doses over a long period, to avoid withdrawal symptoms; elderly or debilitated patients, to avoid possible marked excitement or depression; use with alcohol or other CNS depressants, because of combined effects. **Adverse Reactions:** Drowsiness at daytime sedative dose levels, skin rashes, "hangover" and gastrointestinal disturbances are seldom seen. **Usual Adult Dosage:** For daytime sedation, 15 mg. to 30 mg. t.i.d. or q.i.d. For hypnosis, 50 mg. to 100 mg. **Available as:** Tablets, 15 mg., 30 mg., 50 mg., 100 mg.; Elixir, 30 mg. per 5 cc. (alcohol 7%). BUTICAPS® [Capsules BUTISOL SODIUM (sodium butabarbital)] 15 mg., 30 mg., 50 mg., 100 mg.

**McNEIL**

McNeil Laboratories, Inc., Fort Washington, Pa. 19034



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# MESSAGE FROM THE PRESIDENT



**A**S I write this final President's Page of my year as President of the Kentucky Medical Association, I obviously have some very mixed feelings about the accomplishments of 1972-73 and about the challenges that face us in the future.

This has been a year of great change, PSRO legislation, an increased demand for postgraduate medical education, unbelievable activity by government at all levels in the field of medicine and continuation, hopefully, of the programs that we as physicians feel will mean much in the years ahead. I sincerely wish that I could say to you that many problems have been solved, that a panacea has been found to cure the "ills" that many people feel affect our profession. These things I cannot tell you, but I can sincerely say that every physician who has given of his time, talents and efforts to our Association in these past twelve months has performed a service above and beyond the call of duty. He has taken time to represent you and, hopefully, by so doing, has improved our ability to serve the profession, the patient, and the public. This is, after all, what our Association really must do.

I will be eternally grateful to all of you who have given so much to this Association. I would give special appreciation to the Chairman of the Board of Trustees, Doctor Robert McLeod; the President of the KFMC, Doctor David Hull, and to the other officers with whom it has been my privilege to serve in the past year.

I would also like to take this opportunity to express, publicly, my appreciation of the efforts and accomplishments of your and my excellent staff, Bob Cox, Bill Applegate, Gil Armstrong, Jerry Mahoney, Bob Klinglesmith, Bill Schmidt and our fine staff of girls.

To those of you who have not been active, I would only say your help, your time and your effort are sorely needed if we are to meet the challenges that face us in the future. I urge you to become a part of this active and viable organization.

It has been a privilege and honor for me to serve our Association.

*Lee C. Hession, MD*



### Serologic Tests For Rubella†

WILLIAM P. McELWAIN, M.D., M.P.H.

*Commissioner of Health  
Commonwealth of Kentucky*

**A**LTHOUGH rubella has been recognized as a clinical entity for many years, the public health significance was not appreciated until after the recognition of congenital rubella by Sir Norman Gregg in 1941. After establishing the clinical and public health importance as well as the social and economic impact of rubella, forces were mobilized to control the disease. The isolation of the rubella virus in 1962 and the attenuation of the virus in 1966 made possible the development of a live rubella virus vaccine which was licensed in 1969. Kentucky's Rubella Program was started in 1969.

Since reliable serologic tests to assist in the diagnosis of rubella are available and effective vaccines are available for immunizing the susceptible population, it would appear that the tragic appearance of congenital rubella syndrome should never occur.

The rubella hemagglutination inhibition test (HI), the most widely used technique for quantitating rubella antibodies, is a valuable diagnostic tool which is available from the Virology Laboratory of the Kentucky State Department of Health's Division of Laboratory Services, and several private laboratories throughout Kentucky. Since the Division of Laboratory Services receives frequent inquiries regarding the interpretation of the rubella hemagglutination inhibition test, it was deemed advisable to present a summary of the more commonly encountered clinical problems relating to rubella in which serologic testing can be helpful in diagnosis. The HI test can be of practical assistance

in (1) confirmation of acute rubella infection, (2) determination of immune status of pregnant women exposed to rubella, (3) confirmation of suspected congenital rubella infection and (4) defining need for rubella vaccination.<sup>1</sup>

**Confirmation of Acute Rubella Infection:** Paired sera should be obtained. The first specimen should be collected within three days after onset of illness and a convalescent specimen should be submitted one to two weeks later. A fourfold or greater rise in antibody titer is diagnostic of recent rubella infection. Stable or falling titers indicate past rubella infection at some undetermined time.

**Determination of Immune Status of Pregnant Women Exposed to Rubella:** A serum specimen should be collected within seven days after exposure. If this specimen contains no detectable rubella antibody, a second specimen should be collected three to four weeks after exposure. The presence of any level of rubella antibody within the seven-day period after exposure indicates prior infection with rubella virus and immunity to primary infection. The absence of detectable rubella antibody at the time of exposure indicates susceptibility to rubella. The testing of a second serum three to four weeks after exposure will confirm whether or not rubella infection, apparent or inapparent, has resulted from the exposure.

**Confirmation of Suspected Congenital Rubella Infection:** Serum specimens should be obtained from both the infant and the mother. If the infant is less than six months old, an additional serum should be obtained at six to twelve months of age. Maternally transferred rubella antibody disappears from the infant's circulation by six months of age. Congenital rubella infection can therefore be confirmed

†This article was prepared by: B. F. Brown, M.D., M.P.H., Director, Division of Laboratory Services, Kentucky State Department of Health, 275 East Main Street, Frankfort, Kentucky 40601.



serologically by demonstrating the persistence of antibody above and beyond that which is passively transferred from the mother. In general, the presence of rubella antibody in specimens submitted when the suspect case is six to twelve months old confirms the diagnosis. The degree of confidence in the serologic diagnosis of congenital rubella infection decreases with age above one year, since the chance of antibody having resulted from natural post-natal rubella must be weighed against the likelihood of congenital origin.

**Defining Need for Rubella Vaccination:** A single serum specimen is required. The presence of any level of antibody (1:8 or greater) indicates past rubella infection at some undetermined time, thus immunity to primary infection. Absence of rubella HI antibody indicates susceptibility to rubella.

Specimen mailing containers are available

from all county health departments for submitting serum specimens to the Division of Laboratory Services for the HI test. Approximately 3-5 ml of serum or 8-10 ml of whole blood aseptically collected should be submitted. No preservative should be added and the specimen should not be frozen. If at all possible, serum rather than whole blood should be submitted, thus eliminating the problem of hemolysis which will render the specimen unsatisfactory for examination. All information requested on the rubella submission report form should be provided.

#### Reference

1. Center for Disease Control, Rubella Surveillance, U.S. Department of Health, Education and Welfare, Public Health Service, October 1971, No. 3.

---

## 1973 KMA Annual Meeting September 18-20

### Don't Miss

- ... The Excellent Scientific Program
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- ... The Meetings of the House of Delegates
- ... The Outstanding Scientific and Technical Exhibits
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**Bluegrass Convention Center  
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---

*From the files of the*

COMMITTEE FOR THE  
**STUDY OF MATERNAL MORTALITY**

---

**T**HIS 21-year-old married white, gravida 1, para 0, was admitted to the hospital in active labor on 12-28-70 after an uncomplicated prenatal course. Her labor was uncomplicated, lasting eight hours. She received a saddle block anesthesia by her obstetrician at 5:58 p.m. Her blood pressure was monitored closely, and at 6:05 p.m. her lips and nails were noted to be cyanotic and nasal oxygen was started at 10 L/min.

The following blood pressures were recorded:

5:58	130/76
6:00	110/70
6:02	110/66
6:05	110/70
6:10	100/60
6:13	110/80
6:23	118/80
6:31	122
6:40	120/78
6:50	120/82
7:00	118/80

She delivered by outlet forceps and left mediolateral episiotomy at 7:19 p.m. an 8 lb. 7 1/2 oz. girl, given an Apgar of 9. The placenta was expressed spontaneously and the blood loss was estimated at 150 cc. One ampule of oxytocin was added to the IV at 7:20 p.m.

Approximately three hours and 45 minutes after delivery she began having mid-thoracic pain. She said she had had a similar pain on numerous occasions from a slipped vertebra, and had been treated by a chiropractor. Examination at this time revealed no abnormalities. She was totally relieved with 50 mg of Thorazine. Her physician was with her approximately two hours and she was asleep when he left the hospital.

At 7:15 a.m., 12-29-70, her physician was called and informed that she appeared dyspneic and was in acute distress. Examination

revealed an apical pulse between 160-200 which was irregular. She complained of mid-thoracic pain posteriorly. A consultant was called and supportive therapy began. The diagnosis of possible pulmonary embolus was entertained.

An EKG revealed sinus tachycardia with non-specific ST-T segment changes, interpreted as associated with myocardial ischemia. A portable chest x-ray on 12-29-70 revealed no evidence of active chest disease. A lung scan showed a pulmonary infarct of the lower lateral area of the left lung. A repeat chest x-ray later revealed bilateral infiltrate with left pleural effusion.

On 12-30-70 the x-ray revealed there had been definite decrease in the left pleural effusion as well as in the size of the heart. The heart remained definitely enlarged however. The right lung remained clear.

She was digitalized and seemed to be responding quite well. However, she suddenly expired 12-30-70.

An autopsy was obtained. The positive findings were a dissecting aneurysm of the aorta that had dissected from the thoracic portion to the level of the renal arteries. This ruptured with extravasation of blood into the pleural spaces, as well as into the abdominal cavity resulting in exsanguination. The cause of death was ruptured dissecting aneurysm of the aorta.

#### **Comment**

This case was classified as an indirect obstetric death. This is indeed a most unusual and tragic situation. Such dissecting aneurysms of the aorta are uncommon in people under the age of 40. However, according to Reid<sup>1</sup>, half of the cases reported in women under the age of 40 have been associated with pregnancy or during the post partum period. The patient will

*(Continued on page 606)*





# Bobo's back at the big top

After a rheumatoid arthritic flare-up.

## Butazolidin® alka Geigy

Each capsule contains:  
100 mg. phenylbutazone USP  
100 mg. dried aluminum hydroxide gel USP  
150 mg. magnesium trisilicate USP

**If it doesn't work in a week, forget it.**

and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and GI tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug. **Precautions:** The following should be accomplished at regular intervals. Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight, complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

**Adverse Reactions:** This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute

and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult GI bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult GI bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement (B)98-146-070-H(10/71)

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nsistency

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**Indications:** Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening, in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

**Contraindications:** Known hypersensitivity to flurazepam HCl.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

**Precautions:** In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

**Adverse Reactions:** Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.

**Dosage:** Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

**Supplied:** Capsules containing 15 mg or 30 mg flurazepam HCl.



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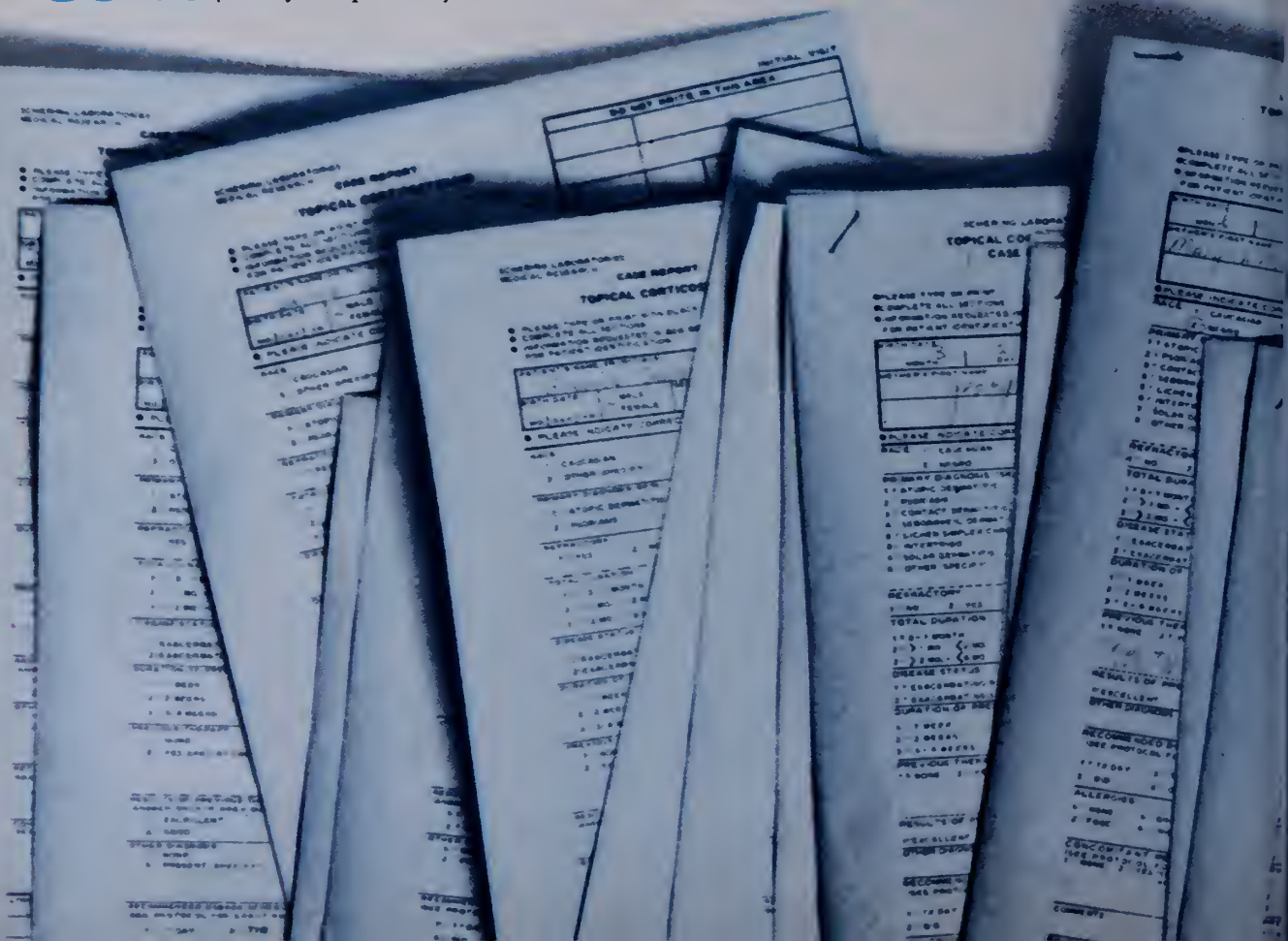
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**85%** in psoriasis  
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**96%** in contact dermatitis  
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**References:** (1) *Files of Headquarters Medical Research Division, Schering Corporation.* (2) Carter, V. H., and Noojin, R. O.: *Curr. Therap. Res.* 9:253, 1967. (3) Falk, M. S.: *Cutis* 2:788, 1966. (4) Goldblum, R. W.: *Pennsylvania Med.* 69:50, 1966. (5) Nierman, M. M.: *J. Indiana M. A.* 10:1184, 1966. (6) Zimmerman, E. H.: *Arch. Dermat.* 95:514, 1967.

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# BACTRIM<sup>TM</sup>

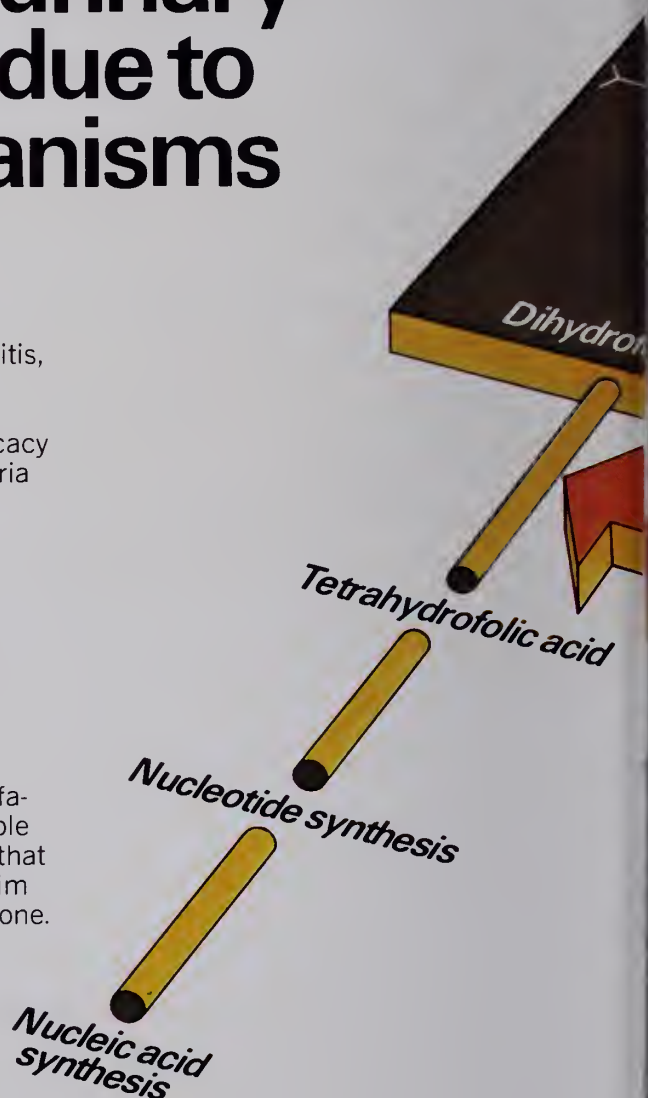
Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

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Bactrim is highly effective in the treatment of these infections – primarily pyelonephritis, pyelitis and cystitis, when due to susceptible organisms (usually *E. coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, and, less frequently, indole-positive proteus species). This efficacy is related to the unique mode of action against bacteria (see opposite page), an action that, in effect, makes Bactrim a new type of antibacterial.

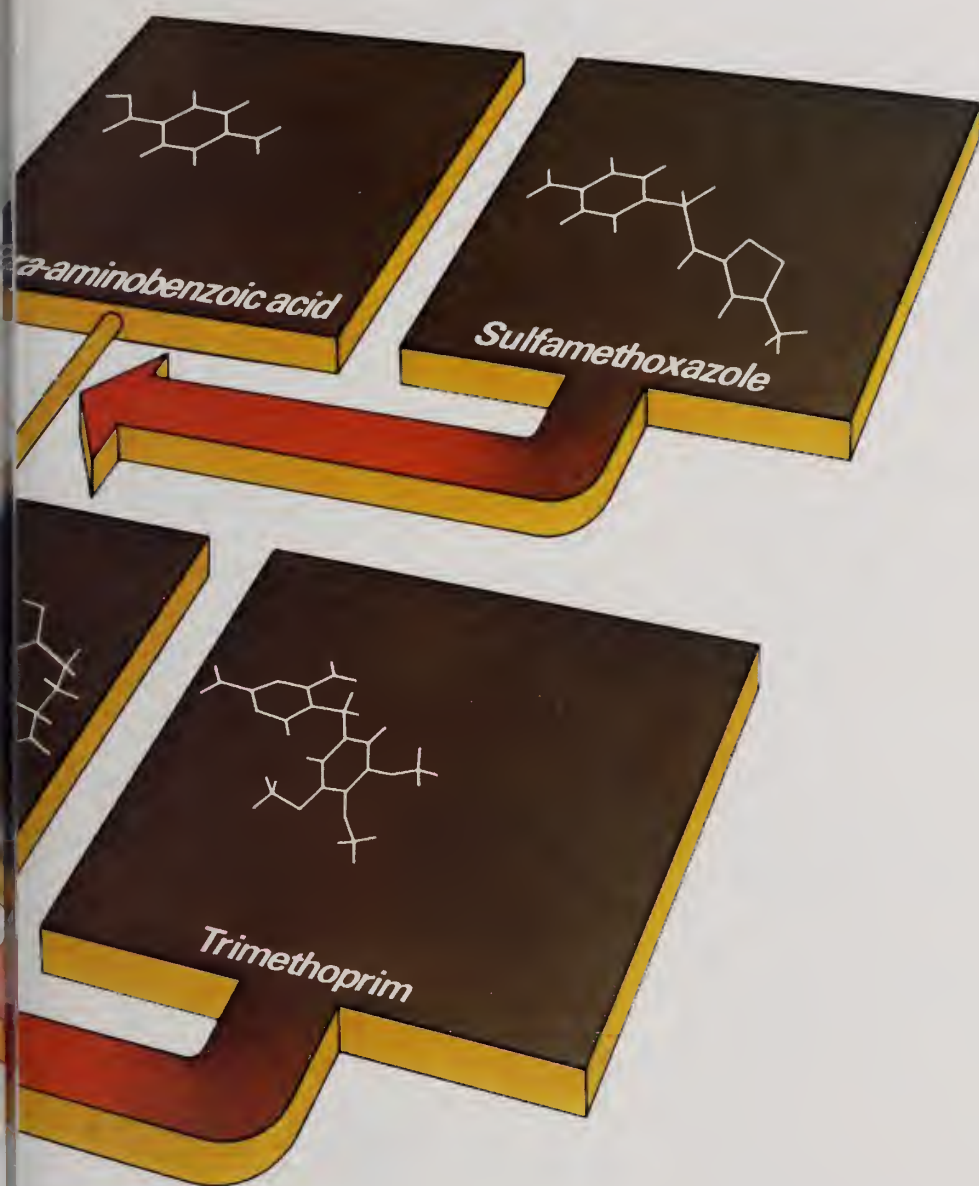
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## Excellent clinical response in chronic urinary tract infections

A multiclinic, double-blind study\* of response to a ten-day course of therapy in 471† patients with chronic urinary tract infections demonstrated the superiority of Bactrim. On the 10th day after initiation of therapy, 91.7% (of 168 patients) showed significant bacteriological response to Bactrim compared with 81.2% (of 144 patients) to trimethoprim and 64.5% (of 155 patients) to sulfamethoxazole. In patients with obstructive complications, 10th day response was 94.8% (of 97 patients) to Bactrim, 72.9% (of 85 patients) to trimethoprim and 58.5% (of 94 patients) to sulfamethoxazole.

## Excellent response maintained

Bactrim proved equally impressive in maintaining this bacteriological response. In the above study, after ten-day therapy with Bactrim, 68.4% of patients with chronic urinary tract infections maintained response for up to 42 consecutive days, compared with 59.7% with trimethoprim and 44.4% with sulfamethoxazole. In patients with obstruction, 70.8% of those on Bactrim maintained response for up to 42 consecutive days, compared

with 49.4% on trimethoprim and 38.8% on sulfamethoxazole. The figures are particularly remarkable in cases with urinary obstruction—cases regarded as being notoriously difficult to treat.

## To date, low incidence of significant side effects

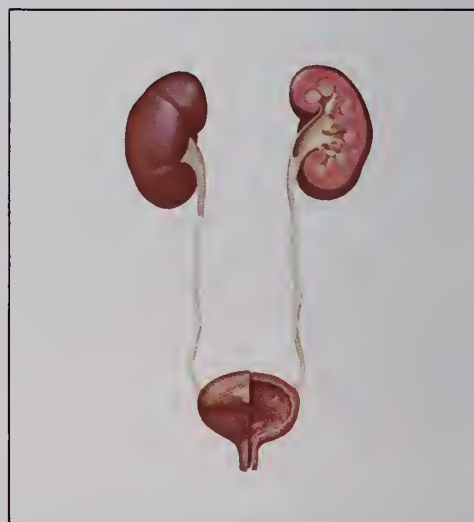
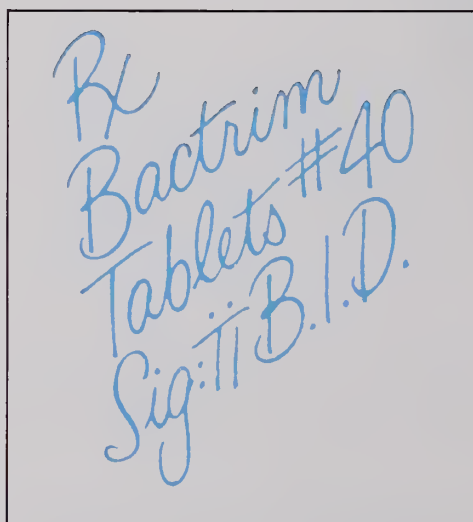
Although Bactrim demonstrated impressive clinical results, it is important to note that the incidence of clinically significant adverse effects was low, mainly nausea and/or vomiting, rash, leukopenia, SGOT increase and creatinine increase.

Bactrim should be given with caution to patients with impaired renal or hepatic function, possible folate deficiency and to those with severe allergy, bronchial asthma. Adequate fluid intake must be maintained. Complete blood counts, urinalyses, careful microscopic examination, and renal function tests should be performed during therapy.

Currently, the increasing frequency of resistant organisms is a limitation of the usefulness of all antibacterial agents, especially in the treatment of chronic and recurrent urinary tract infections.

**Usual adult dosage: two tablets every twelve hours for 10 to 14 days; no loading dose required.**

\* Data on file, Hoffmann-La Roche Inc., Nutley, N.J. 07110.  
† 4 patients not available for evaluation at day 10.



new **BACTRIM**™

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

**for chronic urinary tract infections**



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110

Before prescribing, please consult complete product information on facing page.



## Complete Product Information:

**Description:** Bactrim is a synthetic antibacterial combination product available in scored light-green tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole.

Trimethoprim is 2,4-diamino-5-(3,4,5-trimethoxybenzyl) pyrimidine. It is a white to light-yellow, odorless, bitter compound with a molecular weight of 290.3.

Sulfamethoxazole is N<sup>1</sup>-(5-methyl-3-isoxazolyl)sulfanilamide. It is almost white in color, odorless, tasteless compound with a molecular weight of 253.28.

**Actions: Microbiology:** Sulfamethoxazole inhibits bacterial synthesis of folic acid by competing with para-aminobenzoic acid. Trimethoprim blocks the production of tetrahydrofolic acid from dihydrofolic acid by binding to and reversibly inhibiting the required enzyme, dihydrofolate reductase. Thus, Bactrim blocks two consecutive steps in the biosynthesis of nucleic acids and proteins essential to many bacteria.

Animal studies have shown that bacterial resistance develops more slowly with Bactrim than with trimethoprim or sulfamethoxazole alone.

In serial dilution tests have shown that the spectrum of antibacterial activity of Bactrim includes the common urinary tract organisms with the exception of *Pseudomonas aeruginosa*. The following organisms are usually susceptible: *Escherichia coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis* and indole-positive proteus species.

Representative Minimum Inhibitory Concentration Values for Bactrim-Susceptible Organisms (MIC—mcg/ml)				
Organism	Trimethoprim alone	Sulfamethoxazole alone	TMP/SMX (1:20)	
			TMP	SMX
<i>Escherichia coli</i>	0.05—1.5	1.0 —245	0.05—0.5	0.95— 9.5
<i>Staphylococcus aureus</i> spp.	0.5 —5.0	7.35 —300	0.05—1.5	0.95—28.5
<i>Enterobacteriaceae</i> spp.	0.5 —1.5	7.35 — 30	0.05—0.15	0.95— 2.85
<i>Pseudomonas aeruginosa</i>	0.15—5.0	0.735—245	0.05—1.5	0.95—28.5

**Pharmacology:** Bactrim is rapidly absorbed following oral administration. The blood levels of trimethoprim and sulfamethoxazole are similar to those achieved when each component is given alone. Peak blood levels for the individual components occur one to two hours after oral administration. The half-lives of sulfamethoxazole and trimethoprim, 10 and 16 hours respectively, are relatively the same regardless of whether these compounds are administered as individual components or as Bactrim. Detectable amounts of trimethoprim and sulfamethoxazole are present in the blood 24 hours after drug administration. Free sulfamethoxazole and trimethoprim blood levels are proportionately dose-dependent. Following repeated administration, the steady-state ratio of trimethoprim to sulfamethoxazole levels in the blood is about 1:20.

Sulfamethoxazole exists in the blood as free, conjugated and protein-bound forms; trimethoprim is present as free, protein-bound and metabolized forms. The free forms are considered to be the therapeutically active forms. Approximately 44 percent of trimethoprim and 70 percent of sulfamethoxazole are protein-bound in the blood. The presence of 10 mg percent sulfamethoxazole in plasma does not affect the protein binding of trimethoprim to an insignificant degree; trimethoprim does not influence the protein binding of sulfamethoxazole.

Excretion of Bactrim is chiefly by the kidneys through both glomerular filtration and tubular secretion. Urine concentrations of both sulfamethoxazole and trimethoprim are considerably higher than their concentrations in the blood. When administered together as Bactrim, neither sulfamethoxazole nor trimethoprim affects the urinary excretion pattern of the other.

**Indications:** Chronic urinary tract infections (primarily pyelonephritis and cystitis) due to susceptible organisms (usually *Escherichia coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, and, less frequently, indole-positive proteus species).

**Important note:** Currently, the increasing frequency of resistant organisms is a limitation of the usefulness of all antibacterial agents, especially in the treatment of chronic and recurrent urinary tract infections.

**Contraindications:** Hypersensitivity to trimethoprim or sulfonamides, pregnancy and during the nursing period (see Reproduction Studies).

**Warnings:** Deaths associated with the administration of sulfonamides have been reported from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias. Experience with trimethoprim alone is much more limited, but it has been reported to interfere with hematopoiesis in occasional patients. In elderly patients concurrently receiving certain diuretics, primarily thiazides, an increased incidence of thrombopenia with purpura has been reported.

The presence of clinical signs such as sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. Complete blood counts should be done frequently in patients receiving Bactrim. If a significant reduction in the count of any formed blood element is noted, Bactrim should be discontinued.

At the present time, there is insufficient clinical information on the use of Bactrim in infants and children under 12 years of age to recommend its use.

**Precautions:** Bactrim should be given with caution to patients with impaired renal or hepatic function, to those with possible folate deficiency and to those with severe allergy or bronchial asthma. In glucose-6-phosphate dehydrogenase-deficient individuals, hemolysis may occur. This reaction is frequently dose-related. Adequate fluid intake must be maintained in order to prevent crystalluria and stone formation. Urinalyses with careful microscopic examination and renal function tests should be performed during therapy, particularly for those patients with impaired renal function.

**Adverse Reactions:** For completeness, all major reactions to sulfonamides and to trimethoprim are included below, even though they may not have been reported with Bactrim.

**Blood dyscrasias:** Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia.

**Allergic reactions:** Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis.

**Gastrointestinal reactions:** Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis.

**C.N.S. reactions:** Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness.

**Miscellaneous reactions:** Drug fever, chills, and toxic nephrosis with oliguria and anuria. Periarteritis nodosa and L. E. phenomenon have occurred.

The sulfonamides bear certain chemical similarities to some goitrogenic agents, diuretics (acetazolamide and the thiazides) and oral hypoglycemic agents. Goiter production, diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. Cross-sensitivity may exist with these agents. Rats appear to be especially susceptible to the goitrogenic effects of sulfonamides, and long-term administration has produced thyroid malignancies in the species.

**Dosage and Administration:** Not recommended for use in children under 12 years of age.

The usual adult dosage is two tablets every 12 hours for 10 to 14 days.

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	2 tablets every 24 hours
Below 15	Use not recommended

**How Supplied:** Tablets, containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 1000; Prescription Paks of 40, available singly and in trays of 10. Imprint on tablets: ROCHE 50.

**Reproduction Studies:** In rats, doses of 533 mg/kg sulfamethoxazole or 200 mg/kg trimethoprim produced teratological effects manifested mainly as cleft palates. The highest dose which did not cause cleft palates in rats was 512 mg/kg sulfamethoxazole or 192 mg/kg trimethoprim when administered separately. In two studies in rats, no teratology was observed when 512 mg/kg of sulfamethoxazole was used in combination with 128 mg/kg of trimethoprim. However, in one study, cleft palates were observed in one litter out of 9 when 355 mg/kg of sulfamethoxazole was used in combination with 88 mg/kg of trimethoprim.

In rabbits, trimethoprim administered by intubation from days 8 to 16 of pregnancy at dosages up to 500 mg/kg resulted in higher incidences of dead and resorbed fetuses, particularly at 500 mg/kg. However, there were no significant drug-related teratological effects.

# BACTRIM<sup>TM</sup>

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110

# Recommendations<sup>†</sup> on Combination Live Virus Vaccines

## American Academy of Pediatrics

### Committee on Infectious Diseases

In the September 15, 1971 AAP Newsletter sent to Academy members, the Committee on Infectious Diseases of the American Academy of Pediatrics stated its recommendations on the use of combination live virus vaccines. After a careful review of available data, the committee concluded that:

- "This information indicates that the products are both safe and effective when used as directed."
- The vaccine "...can, therefore, be recommended with the obvious advantages of reduction in the number of injections for any given child and a concomitant decrease in the required visits to a physician's office or clinic."

<sup>†</sup>For complete text of both recommendations see your MSD representative or write to Professional Service Dept., Merck Sharp & Dohme, West Point, Pa. 19486.

## United States Public Health Service

### Advisory Committee on Immunization Practices

In the April 24, 1971 issue of *Morbidity and Mortality Weekly Report*, the Advisory Committee on Immunization Practices of the United States Public Health Service presented recommendations on the use of combination live virus vaccines. The committee stated that:

- "Data indicate that antibody response to each component of these combination vaccines is comparable with antibody response to the individual vaccines given separately."
- "There is no evidence that adverse reactions to the combination products occur more frequently or are more severe than known reactions to individual vaccines (see pertinent ACIP recommendations)."
- "The obvious convenience of giving already selected antigens in combined form should encourage consideration of using these products when appropriate."





# M-M-R\*

(MEASLES, MUMPS AND RUBELLA  
VIRUS VACCINE, LIVE | MSD)

Single-dose vials

M-M-R, given in a single injection, fits easily into  
our routine immunization program for well babies.  
Given at age 12 months, M-M-R provides for vaccina-  
tion early in life against measles, mumps, and rubella.

## MSD suggested immunization schedule for well babies

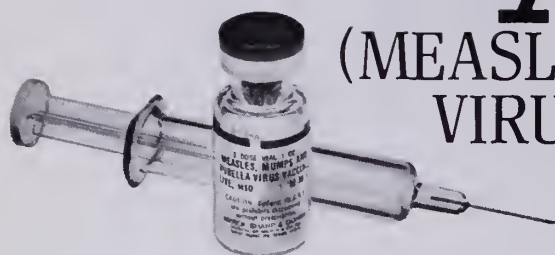
Age	Vaccine(s)
2 months	DPT (diphtheria-pertussis-tetanus) Oral poliomyelitis vaccine (triple)
3 months	DPT <sup>1</sup>
4 months	DPT Oral poliomyelitis vaccine (triple)
6 months	Oral poliomyelitis vaccine (triple)
12 MONTHS	M-M-R (MEASLES, MUMPS AND RUBELLA VIRUS VACCINE, LIVE, MSD)

<sup>1</sup> This vaccination may be given at 3 months, 5 months, or at 6 months, depending on your preference or on the condition of the child.

<sup>2</sup> Vaccination with a live virus vaccine may depress the results of a tuberculin test for four weeks or longer; the test and vaccine should not be given during the same office visit.

\*Trademark of Merck & Co., Inc.

For a brief summary of prescribing information, please see following page.



# M-M-R

## (MEASLES, MUMPS AND RUBELLA VIRUS VACCINE, LIVE | MSD)

Single-dose vials

No untoward reactions peculiar to the combination vaccine (M-M-R) have been reported.

Moderate fever (101-102.9 F) occurs occasionally. High fever (over 103 F) occurs less commonly. On rare occasions, children who develop fever may exhibit febrile convulsions. Rash (usually minimal and without generalized distribution) may occur infrequently.

Since clinical experience with measles, mumps, and rubella virus vaccines given individually indicates that very rarely encephalitis and other nervous system reactions have occurred, such reactions may also occur with M-M-R. A cause and effect relationship, however,

has not been established.

Excretion of the live attenuated rubella virus from the throat has occurred in the majority of susceptible individuals administered the rubella vaccine. There is no definitive evidence to indicate that such virus is contagious to susceptible persons who are in contact with the vaccinated individuals. Consequently, transmission, while accepted as a theoretical possibility, has not been regarded as a significant risk.

Must not be given to women who are pregnant or who might become pregnant within three months following vaccination.

**Contraindications:** Pregnancy or possibility of pregnancy within three months following vaccination; infants less than one year old; sensitivity to chicken or duck, chicken or duck eggs or feathers, or neomycin; any febrile respiratory illness or other active febrile infection; active untreated tuberculosis; therapy with ACTH, corticosteroids, irradiation, alkylating agents, or antimetabolites; blood dyscrasias, leukemia, lymphomas of any type, or other malignant neoplasms affecting the bone marrow or lymphatic systems; gamma globulin deficiency, i.e., agammaglobulinemia, hypogammaglobulinemia, and dysgammaglobulinemia.

**Precautions:** Administer subcutaneously; do not give intravenously. Epinephrine should be available for immediate use should an anaphylactoid reaction occur. Should not be given less than one month before or after immunization with other live virus vaccines; vaccination should be deferred for at least six weeks following blood transfusions or administration of more than 0.02 cc immune serum globulin (human) per pound of body weight, or human plasma.

Due caution should be employed in children with a history of febrile convulsions, cerebral injury, or any other condition in which stress due to fever should be avoided. The physician should be alert to the temperature elevation which may occur after vaccination.

Excretion of the live attenuated rubella virus from the throat has occurred in the majority of susceptible individuals administered the rubella vaccine. There is no definitive evidence to indicate that such virus is contagious to susceptible persons who are in contact with the vaccinated individuals. Consequently, transmission, while accepted as a theoretical possibility, has not been regarded as a significant risk.

Attenuated live virus measles and mumps vaccines, given separately, may temporarily depress tuberculin skin sensitivity; therefore, if a tuberculin test is to be done, it should be scheduled before vaccination, to avoid the possibility of a false negative response.

Before reconstitution, refrigerate vaccine at 2-8 C (35.6-46.4 F) and protect from light. Use only diluent supplied to reconstitute vaccine. If not used immediately, return reconstituted vaccine to refrigerator at 2-8 C (35.6-46.4 F), and discard after eight hours.

**Adverse Reactions:** Fever, rash; mild local reactions such as erythema, induration, tenderness, regional lymphadenopathy; parotitis; thrombocytopenia or purpura; allergic reactions such as urticaria; arthralgia, and polyneuritis.

Occasionally, moderate fever (101-102.9 F); less commonly, high fever (above 103 F); rarely, febrile convulsions.

Encephalitis and other nervous system reactions that have occurred very rarely with the individual vaccine may also occur with the combined vaccine.

Transient arthritis, arthralgia, and polyneuritis are features of natural rubella and vary in frequency and severity with age and sex, being greatest in adult males and least in prepubertal children. Such reactions have been reported with live attenuated rubella virus vaccines. Symptoms relating to joints (pain, swelling, stiffness, etc.) and to peripheral nerves (paresthesia, numbness, tingling, etc.) occurring within approximately two months after immunization should be considered as possibly vaccine related. Symptoms have generally been mild and of no more than three days duration. The incidence in prepubertal children who appear to be less than 1% for reactions that would interfere with normal activity or necessitate medical attention.

**How Supplied:** Single-dose vials of lyophilized vaccine, containing when reconstituted not less than 1,000 TCID<sub>50</sub> (tissue culture infectious doses) measles virus vaccine, live, attenuated, 5,000 TCID<sub>50</sub> mumps virus vaccine, live, and 1,000 TCID<sub>50</sub> of rubella virus vaccine, live, expressed in terms of the assigned titer of the NIH Reference Measles, Mumps, and Rubella Viruses, and approximately 25 mcg neomycin with a disposable syringe containing diluent and fitted with a 25-gauge, 5/8" needle. Also in boxes of 10 single dose vials nested in a pop-out tray with a separate box of 10 diluent-containing syringes.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., INC., West Point, Pa. 19486

**MSI**  
**MERC**  
**SHARP**  
**DOHME**





## Blue Cross and Blue Shield Utilization Review

Q. Does Blue Cross and Blue Shield of Kentucky perform Utilization Review in the daily processing of claims?

A. *Yes. The Blue Cross and Blue Shield Utilization Review Program has developed parameters, based upon claims history, involving lengths of stay and ancillary services against which claims received are routinely measured.*

Q. What happens when cases fall outside of the established parameters?

A. *These cases are screened first by the Blue Cross Audit Department, and then by one of our physician staff members in an effort to determine why. After receiving the appropriate medical information and completing review of the claim, the case could be routinely paid.*

Q. What if the medical documentation doesn't justify the care rendered in the opinion of the reviewing physician?

A. *For years the Kentucky Medical Association Advisory Committee to Blue Cross served as the review mechanism for such cases; however, in June 1972, this Committee recommended the review process be transferred to the Kentucky Foundation for Medical Care. The first level of review is the local hospital Utilization Review Committee.*

Q. What happens if the attending physician, the patient or the Blue Cross and Blue Shield Plans disagree with the recommendation of the hospital Utilization Review Committee?

A. *The very structure of the Kentucky Foundation for Medical Care provides for different levels of review. If additional review becomes necessary, the case would be referred next to the appropriate Kentucky Foundation for Medical Care District Review Committee, and next to the Foundation's Claims and Utilization Review Committee.*

Q. Will the recommendations of the Foundation's review system usually be accepted by Blue Cross and Blue Shield of Kentucky?

A. *Yes, subject to the limitations and exclusions of the patient's Certificate of Membership.*

Q. Are any cases referred for review by anyone other than the Blue Cross and Blue Shield physician staff?

A. *Absolutely not. Although lay and registered nurse staff are used in routine case screening, only the Blue Cross and Blue Shield physician staff has the responsibility to determine if a case should be referred to the review process.*

Q. Why should local hospital Utilization Review Committees be involved in the review process?

A. *There are several reasons, including uniformity of review, more efficient review that is responsive to local situations, and avoiding the dual standards of review that could occur if review were performed at several different levels. Also, a system involving a single level of review would probably be less costly than a system with multiple review levels. From all indications, legislation involving Professional Standards Review Organizations is placing tremendous emphasis on Utilization Review activities at the hospital medical staff level.*

Q. Are the Blue Cross and Blue Shield parameters available to local hospital Utilization Review Committees?

A. *Yes. Not only are the parameters available, but our Utilization Review Department is also capable of generating special reports and studies based upon Blue Cross and Blue Shield claims history, that could be of great value to hospital Utilization Review Committees.*

**If questions arise regarding the Blue Cross and Blue Shield Utilization Review Program, please contact the Professional Relations Division, Blue Cross Hospital Plan, Inc., 3101 Bardstown Road, Louisville, Kentucky 40205, Phone (502) 452-1511.**

# Pinworm therapy is often a family affair



**Contraindications:** History of hypersensitivity to thiabendazole.

**Warnings:** If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.

**Precautions:** Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction,

patients should be carefully monitored.

**Adverse Reactions:** Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of Ascaris in the mouth and nose. Hypersensitivity reactions



# Chewable Tablets 500 mg Mintezol<sup>®</sup> THIABENDAZOLE | MSD)



easy to take  
everyone in the family  
can keep to the  
regimen you prescribe

side: fever, facial flush, chills, conjunctival injection,  
edema, anaphylaxis, skin rashes, erythema multiforme  
(including Stevens-Johnson syndrome), and lymphadenopathy.  
Indication: Chewable tablets, containing 500 mg thiabendazole,  
boxes of 36, strip packaged, individually foil wrapped;  
suspension, containing 500 mg thiabendazole per 5 ml, in  
bottles of 120 ml.

For more detailed information, consult your MSD representa-  
tion or see full prescribing information. Merck Sharp &  
Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

**MSD**  
MERCK  
SHARP  
DOHME  
*addendum*

## INDICATION | DOSAGE SCHEDULE

MINTEZOL<sup>®</sup> (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infections. Dosages are weight related. For your convenience, the information in the weight-dose chart below is included in the full prescribing information and in the 1973 edition of PDR.

*The recommended maximum daily dose of MINTEZOL is 3 g (6 tablets).*

MINTEZOL should be given after meals if possible. Dietary restriction, complementary medications, and cleansing enemas are not needed.

The usual dosage schedule for all conditions is two doses per day. The size of the dose is determined by the patient's weight.

Weight-dose chart:

WEIGHT (lb)	EACH DOSE (g)	TABLETS
25	0.25	½
50	0.5	1
75	0.75	1½
100	1.0	2
125	1.25	2½
150 & over	1.5	3

The regimen for each indication follows:

INDICATION	REGIMEN	COMMENTS
Pinworm disease	Two doses per day for 1 day. Repeat in 7 days.  This regimen is designed to reduce the risk of reinfection.	If this is not practical, give 2 doses per day for 2 successive days.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses per day for 2 successive days.	A single dose of 20 mg/lb or 50 mg/kg may be employed as an alternative schedule, but a higher incidence of side effects should be expected.
Creeping eruption	Two doses per day for 2 successive days.	If active lesions are still present 2 days after completion of therapy, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses per day for 2 to 4 successive days according to the response of the patient.	The optimal dosage for the treatment of trichinosis has not been established.

\*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.

new

# DARVOCET-N<sup>®</sup>

50 mg. propoxyphene napsylate  
and 325 mg. acetaminophen

Lilly  
TABLETS

*Additional information available to the profession on request.  
Eli Lilly and Company, Indianapolis, Indiana 46206*

300104



# *The* JOURNAL *of the* Kentucky Medical Association

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## Disseminated Intravascular Coagulation

EDWARD J. FADELL, M.D.,\* AND CHARLES E. DOBBS, M.D.

*Louisville, Kentucky*

*Disseminated intravascular coagulation poses a not uncommon clinical problem. Prompt laboratory diagnostic procedures should be available. Therapeutic efforts require an understanding of the underlying pathophysiology.*

WHEN clotting is initiated platelets adhere to a surface and aggregate. Subsequently other coagulation factors are deposited in sequence with the result that generated thrombin converts fibrinogen to fibrin monomers. Fibrin monomers polymerize to form long fibrin strands. These strands are interlaced through the platelet aggregates to form a blood clot. Factors commonly consumed in the process include Factors V, VIII, platelets and fibrinogen.<sup>1</sup>

When clot formation is initiated, a system of clot lysis is also activated. An inactive proteolytic enzyme, plasminogen, is activated forming plasmin which digests fibrin strands producing fibrinogen/fibrin degradation products (FDP) with resultant clot lysis.<sup>2</sup> This system of lysis represents an important compensatory mechanism which prevents indiscriminate clotting. In the body this system of clot formation and lysis is usually localized. Inhibitors are present in the plasma which prevent the localized process from becoming generalized.

If there is a generalized activation of the

coagulation process (disseminated intravascular coagulation—DIC), in conditions such as septicemias and abruptio placentae, fibrin is laid down in large quantities and fibrinolytic activity is widespread. Consequent overwhelming of the inhibitor system occurs and platelets, Factors V, VIII and fibrinogen are consumed with body-wide deficiencies and bleeding. Additionally, as plasmin digests fibrinogen and fibrin, the digestive products (FDP) interfere with further polymerization of fibrin monomer. This interference acts as an anticoagulant and potentiates bleeding by a mechanism other than simple depletion.

FDP can be determined by an agglutination-inhibition<sup>3</sup> test or by staphylococcal clumping.<sup>4</sup> These tests are rather simple to perform, however, they are time-consuming. Procedures referred to as paracoagulation tests are available for the determination of fibrin monomers. The most useful of these is that of protamine sulfate precipitation which can be performed in a short period of time.<sup>5</sup> Other paracoagulation tests such as the Ethanol gelation test<sup>6</sup> and the Fi test<sup>3</sup> yield less consistent results in our hands.

Simple "screening" tests for DIC therefore are as follows: prothrombin time, partial thromboplastin time, platelet count, fibrinogen level and protamine sulfate precipitation. DIC may be variable in its intensity. In the full-blown presentation, all of the stated laboratory studies may be abnormal. In the early stages one can anticipate a fall in the fibrinogen concentration and a prolonged thrombin time. In pregnancy, one should be cognizant of the

\*Director of Laboratories, Methodist Evangelical Hospital, Louisville

usually high level of fibrinogen present. A decreased level may actually be in a range considered low normal for the non-pregnant individual. The thrombin time, which reflects the reactivity of fibrinogen to thrombin, will usually be prolonged early. In view of the seriousness of DIC, early clinical awareness of the possibility is mandatory and all the listed "screening" tests should be readily available and requested.

DIC may be associated with many clinical entities: amniotic fluid embolism, tissue thromboplastin release from the placenta or tumor cells, bacterial endotoxemia, incompatible blood transfusions, shock, viral and rickettsial infections, dead fetus syndrome and acute promyelocytic leukemia.<sup>7</sup> The most common clinical situation in which acute DIC is encountered in the private community hospital is that of an obstetrical complication. This is in contrast to chronic DIC where the bleeding is usually milder and more commonly associated with malignancy and liver diseases.

#### Illustrative Cases

A 30-year-old Para I, Gravida II, female was admitted for Cesarean section. In 1969 she had a previous Cesarean section. There was a past history of bronchiectasis. At approximately 11:00 a.m. on the day of admission she was taken to surgery and had a repeat Cesarean section. There was delivery of a live birth with a good fetal tone. At this time bilateral tubal ligation was accomplished. Approximately five hours post partum, bleeding from the surgical incision was noted. Additionally, heavy vaginal bleeding was present. There was a drop in blood pressure. Clotting of the vaginal blood was not evident. The fibrinogen level was less than 15 mg%. The platelets were 15,000 and the partial thromboplastin time was 178 seconds (normal 35-40 seconds). Replacement therapy with whole blood, fibrinogen and platelets was accomplished. Heparin was given. The patient became cyanotic. Bennett therapy was continued. She expired at approximately 11:40 p.m.

Post mortem sections taken from the lungs revealed within alveolar capillary-sized vessels, the presence of eosinophilic evident fibrin thrombi in abundance. Major pulmonic vessel involvement could not be identified. The find-

ings of chronic bronchiectasis were present.

Similar microthrombi could be identified within the liver. These were predominantly within sinusoids, although occasionally small portal vascular channels contained similar fibrin plugs. An evident associated marked parenchymal cellular necrosis was present. This necrosis was focal within the lobules and had no particular relationship to the central veins.

The glomeruli of the kidneys had very prominent occlusive fibrin thrombi.

The adrenal glands had striking cortical hemorrhagic necrosis focally throughout. Lipid depletion was prominent.

Within the myocardium and within the brain, again occlusive thrombi within small vascular channels could be identified. At these sites associated tissue necrosis was not present.

Another case was a Para V, Gravida VI, 40-year-old female who was taken to surgery following abruptio placenta. Cesarean section was accomplished. Shortly following the Cesarean section, abdominal wound and vaginal bleeding was noted. This became intense. Blood studies revealed a fibrinogen of 76 mg%, prothrombin time 15 seconds, control 11.5 seconds, partial thromboplastin time 50 seconds, platelet count 173,000, thrombin time 18 seconds (normal 3.5-5.6 seconds). The protamine sulfate test was positive. Seven units of blood were given together with three units of fibrinogen. A hysterectomy was performed. In the postoperative period there was a return of the laboratory findings toward normal.

The therapy of DIC has evolved from the pathophysiology described in the preceding paragraphs. Disseminated intravascular coagulation as a mechanism of fibrin depletion lends logic to the need for Heparin administration. The relative contraindication of fibrinogen and anti-fibrinolytic therapy is also more clearly understood. When given in single therapy, replacement of depleted factors can potentiate clotting adding "fuel to the fire".<sup>9</sup> Anti-fibrinolytic therapy, inhibiting fibrinolysis results in the loss of a compensatory process and can lead to disaster.<sup>10</sup> The risk of Heparin therapy in a patient that is actively bleeding is self evident.

The following approach to therapy is suggested: 1) Identify the precipitating event and if possible, correct it. Septicemia and many



obstetrical emergencies when treated promptly result in rapid reversion of the coagulation abnormalities to normal, and frequently no other therapy is indicated. 2) If the process appears severe with significant hemorrhage or if surgery is required in the face of severe defibrination, aggressive specific therapy is indicated without delay. Replacement therapy with a source of fibrinogen and Factor VIII should be given. Commercial fibrinogen preparations have a high incidence of hepatitis. Cryoprecipitated plasma (Cryo) rich in Factor VIII contains 250 milligrams fibrinogen per unit. This plasma fraction is the preferred fibrinogen source. Replacement therapy should yield fibrinogen sufficient to give a plasma concentration of 100 mg%. Approximately ten to twelve units of Cryo are sufficient. At the same time, so as to interrupt the coagulation process and to block potentiation of coagulation by transfused plasma products, Heparin should be given intravenously in a dose of 100 units per kilogram every four hours. Amicar therapy is rarely indicated. Platelets can be given as an additional replacement if necessary.

The effectiveness of therapy can be monitored by serial measurement of the altered coagulation factor levels. Once the precipitating event has been controlled and the DIC in-

terrupted, the fibrin split products are rapidly cleared from the circulation. Depleted coagulation factors are synthesized and recovery occurs.

In summary, DIC is a common condition. Frequently vigorous treatment of the precipitating event results in spontaneous improvement. If specific replacement therapy is required, Heparin administration is indicated.

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## 1973 Scientific Program

### THEMES

#### Renal Problems

#### Critical Care Medicine

#### Sex and Its Consequences

#### Pollution

KMA Annual Meeting

Louisville, Kentucky

# Spinal Injuries in Kentucky†

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*Kentucky has an inordinately large number of spinal injury victims. A state-wide system is needed to provide comprehensive care and rehabilitation for these victims.*

IN the past ten years significant improvements have been made in the management of patients with spinal cord injury, although we are still unable to alter the neurological state of a patient with a complete spinal cord transection. Early surgical spinal fixation, particularly in the cervical region, allows almost immediate mobilization of the patient permitting rapid rehabilitation. Such a program requires the close coordination of many personnel working in a multi-disciplinary center specializing in all phases of spinal injury care. Unfortunately no center exists in Kentucky which can provide all phases of care needed for the spinal injury victim. On November 13, 1971, medical personnel from Kentucky sharing a common interest in spinal cord injuries met in Frankfort to discuss the problems related to the comprehensive management of the spinal injury patient in Kentucky. This publication based upon that conference presents an analysis of the acute spinal injury patients in Kentucky and particularly those treated at the Albert B. Chandler Medical Center, University of Kentucky, Lexington. It is intended to point out 1) the magnitude of the problem with spinal injuries in Kentucky, 2) newer trends in treatment and 3) the shortcomings of the present treatment programs in Kentucky.

## Incidence of Spinal Injuries

It is estimated that there are between 8,000 and 10,000 new spinal injury cases in the United States each year. Kentucky with 3.2 million people constitutes 1.6% of the total United States population (203.2 million people). Based upon national statistics we would

predict that there should be 130 to 160 new cases of spinal injury each year in Kentucky. Yet in 1970, there were 200 new, significant spinal injuries treated in Lexington alone (based upon all hospital admissions that year) with an estimated total of 300 to 400 new injuries being treated in the entire state. Hence, spinal injuries are two times more common in Kentucky than the remainder of the United States and four times more common than in Australia or Switzerland.<sup>1</sup> A possible cause for this inordinately high incidence of spinal injuries in Kentucky is that 70% of the spinal injury patients admitted to the University of Kentucky Medical Center since 1964 were acutely intoxicated with alcohol at the time of the original hospital admission (based upon history, physical examination and/or blood alcohol determination). The combination of acute alcoholic intoxication, automobiles, and winding mountainous roads of Eastern Kentucky (Fig. 1) and the driving habits of the young intoxicated drivers provides an ideal milieu for serious injury.



During the eight year period, 1964 through 1971, a total of 273 new patients with acute spinal injuries have been treated at the University of Kentucky Medical Center, Lexington (Table 1). Approximately 70% of these patients had major neurological deficit. Generally the number of patients treated has increased yearly since the opening of the Neurosurgical Division in 1964.

The major cause of spinal injury is automobile accidents (Table 2) and injury occurs most

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commonly in the age group of 16 through 30 (Table 3). Recognition of spinal injury usually poses no problem since 94% of the patients were referred for neurosurgical care within seven days of the time of injury (Table 4). Cervical injury accounted for over half of the injuries seen; the anatomical level and neurological status is shown in Table 5.

**Table 1**

Patients with Spinal Injuries, University of Kentucky			
Year	Neurological Deficit*	Minor or No Deficit	Totals
1964	11	6	17
1965	12	3	15
1966	15	6	21
1967	24	14	38
1968	37	8	45
1969	29	8	37
1970	30	16	48
1971	31	23	54
Total	189	84	273

\*Includes patients with major spinal cord or cauda equina injury.

### Objectives of Treatment

A program of treatment of spinal injuries was started at the University of Kentucky in 1964, based upon the following premises:

1) Nothing can be done to restore the continuity of the anatomically transected spinal cord.

2) Laminectomy is rarely indicated in the treatment of acute spinal cord injury.<sup>2</sup>

3) Early or late spinal instability offers the greatest threat to the nerve roots and spinal cord which have been preserved.

4) Early mobilization and rehabilitation of the patient regardless of the status of the spinal cord and nerve roots would be helpful in solving problems attending prolonged immobilization. Early mobilization would also significantly reduce the time necessary for acute bed occupancy particularly in patients with less severe spinal cord injuries.

To achieve our objectives we instituted a program of early anterior spinal cord decom-

<b>Table 2</b> Cause of Spinal Injuries (273), University of Kentucky (1964-1971)	
Automobile Accidents	177
Accidents Related to Employment	16
Sports (Diving, Falls from Horses, Football)	9
Falls (Chiefly while Intoxicated)	30
Gunshot Wounds (One stab wound)	41

pression and fusion in patients with cervical fracture-dislocations, posterior cervical fusion in patients with odontoid fractures and Harrington rod fixation of the thoracolumbar spinal injuries (Table 6). Since 1970, we have been less enthusiastic about the Harrington rod technique and are now employing an anterior fusion technique in some patients with unstable thoracolumbar fractures.

**Table 3**

Age of Patients with Major Neurological Deficit (180)	
Age	Number of Patients
1-15	8
16-30	94
31-45	42
> 45	36

In the entire series of 273 patients 137 (50%) had no operations. The usual reason for not operating was a stable fracture or medical contraindications to early operation. By performing early spine fusions and spinal cord decompression the mean hospital stay for cervical spinal cord transection was 36 days, and only 18 days for patients with incomplete lesions.<sup>3</sup> Presently the national average hospital stay for patients with cervical spinal cord transection is 90 days.

Following surgical fusion, when the patient is able to be out of bed, has been given introductory physical therapy, and is capable of being cared for outside the acute neurosurgical unit he is transferred to one of the following: (decreasing order of frequency) 1) his own home, 2) nursing home, 3) community hospital, 4) area rehabilitation units (primarily for children and adolescents), 5) a rehabilita-

**Table 4**

Time Lapse From Injury to Arrival At University of Kentucky (1964-1971) — 273 Fractures

Time	Level Fractured			Total	Cumulative Percentage
	Cervical	Thoracic	Lumbar		
<24 hrs.	95	57	38	190	70%
2-3 days	19	10	8	37	83%
4-7 days	11	6	1	18	94%
>8 days	16	5	7	28	
				Total 273	

**Table 5**  
Level of Injury and Neurological Deficit (273)

	Transection	Incomplete Lesion	Minor or No Neurological Deficit
Cervical	39*	53	49
Thoracic	42**	24	12
Lumbar	11	19	24
	<u>92</u>	<u>96</u>	<u>85</u>

\* 11 deaths within 30 days of injury

\*\* 1 death within 30 days of injury

tion center. Our program is far from satisfactory but is necessary due to the limited bed space, lack of rehabilitation space and funds for the typical patient—an indigent young man who receives a major spinal cord injury as a result of driving while intoxicated. Ideally all patients should be fully rehabilitated before final release from an institution.

In 1970, 30 patients with major neurological deficit were admitted to the University of Kentucky Medical Center. The mean stay for these patients (including all levels of spinal injury) was 30 days, producing a total of 900 patient-days. Had the patients been kept for 120 days (an estimate for complete rehabilitation), this would constitute 3600 patient days, (the equivalent of 10 hospital beds fully occupied for one year). This accounts for only major spinal injuries in a single hospital. The cost of such a comprehensive program would be prohibitive if all the care was provided within an acute care hospital.

#### Plan For Kentucky

As a result of the Frankfort conference it was decided that acute neurosurgical management should continue to be provided in both Lexington and Louisville with early mobilization provided based upon the philosophy of early surgical spinal fixation. The acute hos-

pitalization would vary from one to four weeks, depending on the severity of the injury. During the subacute stage (once the patient's condition is stabilized following surgery) the patient should be transferred from an acute care hospital to an active rehabilitation center (again located in Louisville and Lexington) providing intense concentration upon early rehabilitation.

Although Louisville presently has a suitable facility to provide the subacute care and rehabilitation, none is available in Lexington. It is anticipated that this subacute phase treatment would require an additional four to eight weeks with the family actively participating in the program. The final rehabilitation phase should take place in a single centralized unit providing continued active rehabilitation of the already mobilized and moderately independent patient. This phase should be performed in conjunction with the patient's vocational retraining. Patients who lack incentive to achieve rehabilitation goals would not remain in the spinal injury rehabilitation program but be cared for outside the unit. The initial cost of such a program might seem prohibitive but the eventual cost for such specialized injury care has proved economical. As an example the spinal injury center in Phoenix, Arizona calculates a 20-30% reduction of current expenditures by the comprehensive approach to the

**Table 6**  
OPERATIONS

	Laminectomy	Harrington Rods with and without Laminectomy	Posterior Cervical Fusion (Odontoid Fractures)	Anterior Fusions		Body Replacement
Cervical	6 (5 open fractures)		12	Cloward 31	Smith-Robinson 7	20
Thoracic	21 (15 open fractures)	15				
Lumbar	16 (8 open fractures)	6				3
Total	<u>43</u> (28 open fractures)	<u>21</u>	<u>12</u>	<u>31</u>	<u>7</u>	<u>23</u>

137 Patients Had Operations

136 Patients Had No Operation



problem of spinal injuries. One insurance company which invested in the successful rehabilitation of 26 patients with spinal injuries calculated a 600% saving of their investment.<sup>4</sup>

### Conclusions

Spinal injuries continue to represent a major health problem in Kentucky. In view of the high incidence of spinal injuries in Kentucky an effective program should be instituted to reduce spinal injuries through the control of drunken driving. Few patients with spinal injuries receive optimal care in Kentucky under the present care system. The establishment of a

state-wide program in Kentucky for the management of patients with spinal injuries would provide a more efficient and economical means of rehabilitating the patient with a spinal injury.

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# Possible Factors Involving Staphylococci Colonization

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*Staphylococci colonization in the nasal area among hospital personnel may be influenced by many factors. These factors are discussed with possible underlying causes. Results obtained herein give added information to the parasitic existence of this organism.*

THE history of our knowledge concerning the staphylococci and staphylococcal diseases in hospitals can be written in volumes of paper, but in spite of such enormous information many questions are yet unanswered.

A predominating role in the production of staphylococcal disease cannot be assigned to any single virulence factor. The capacity of a strain to induce infection is derived from the sum total of properties at its command.<sup>1</sup> For example, pathogenic strains of *Staphylococcus aureus* have the ability to produce coagulase, leukocidins, hyaluronidase, toxins, hemolysins, enterotoxins and penicillinase. All of these characteristics cause this organism to resist the normal and antibiotic defenses the human being has at his disposal.

Infection does not result from the mere presence of the cocci in tissues. When one considers the wide distribution of staphylococci and the numerous opportunities for exposure to them the incidence of staphylococcal disease is not very great.<sup>2</sup>

In spite of recent advances in knowledge, the staphylococci are still an exciting challenge. This challenge takes on several forms: a. What factors are actually responsible for the production of disease? b. Why does this organism persist in the human body for such short periods in some cases, and long periods in others? c. What causes the staphylococci to change

from a normal commensal organism to a pathogenic organism?

## Purpose of Research

Two years ago we began a study trying to determine the reasons for colonization of coagulase positive staphylococci in the nasal area of hospital personnel. At that time, the percentage of positive nasal samplings with staphylococci was 19.5% (108/555). The finding was that patient contact was not a contributing factor in enhancing colonization.<sup>3</sup>

The factors in the host in the staphylococci that lead to the establishment of the carrier state are quite unknown. There is still a clear need of research in this area. There is also a continued need to discover to what extent there are varieties of staphylococci whose continued existence may be dependent on the production of disease. Is this because the organism is less well-adapted to the peaceful commensalism of a healthy carrier?<sup>3</sup>

We are still concerned about the underlying causes of colonization as our first study indicated. However, in addition, we wanted to determine the specific phage typing patterns and penicillinase activity of the isolates among hospital working personnel to ascertain if these factors might be significant.

## Materials and Methods

Nasopharyngeal swabs were used to obtain samples from the working personnel of the hospital. The swabs were immediately streaked on *Staphylococcus* #110, mannitol salt and Vogel-Johnson agar media. All plates were incubated at least 48 hours at 35 C. Suspected colonies growing on any of these media were so recorded, and subcultures were made on citrated rabbit plasma for the coagulase test, trypticase soy broth for the Kirby-Bauer antibiotic sensitivity test for penicillin,<sup>4</sup> and trypticase soy agar slant for phage typing.

Each of the participants in the survey were

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asked the following questions at the time of sampling:

1. name
2. sex
3. age
4. How long have you worked at St. Joseph Hospital?
5. How long have you worked in a hospital environment?
6. Have you ever been tested for *Staphylococcus aureus* before?
7. If the answer to the above question was yes, were the results positive or negative?
8. Have you received penicillin in the past 12 months?
9. If the answer to the above question was yes, approximately how long ago did you receive your last medication?
10. Have you ever had any illness that was caused by *S. aureus*?
11. If so, what was it?

12. Has any member of your immediate family been infected with *S. aureus*?

13. What is your position here at St. Joseph Hospital?

14. Do you have any patient contact?

The results of this investigation were computerized at Eastern Kentucky University and statistically evaluated using the Chi square analysis.

### Results and Discussion

A total of 605 specimens were obtained from the working personnel from St. Joseph. The overall percentage of positive coagulase carriers was 16.4%, i.e., 99 positive carriers from a total of 605 samplings (Table I). Table I also shows the departmental breakdown of the individuals tested, the number of individuals with coagulase positive *S. aureus* in the nasal area, the number of coagulase positive staphy-

Table I

Departmental Breakdown of staphylococci carriers

Department	Total # Tested	# Coagulase positive	Resistant to Penicillin	Patient Contact	No patient contact but Coagulase +
Administration	8	0	0	0	0
Business Office	21	6	1	0	5
Elevator Operator	1	0	0	0	0
Emergency Room	18	6	4	17	0
Coronary Care Unit	5	1	1	5	0
Housekeeping	60	7	4	7	5
Intensive Care Unit	13	2	1	13	0
Kitchen	57	13	4	22	8
Clinical Laboratory	58	12	6	48	3
Maintenance	13	3	1	0	3
Medical Records	16	2	1	0	2
Laundry	17	4	1	0	4
Nursing Service	22	2	1	19	0
Pharmacy	3	1	1	0	1
Physical Therapy	5	0	0	5	0
Receptionists	2	0	0	0	0
Respiratory Therapy	10	2	2	10	0
Surgery	56	6	4	53	0
6th Floor (Nursery)	32	7	7	31	0
5th Floor					
5A	16	3	2	16	0
5B	17	2	2	17	0
5S (Mat)	17	1	1	17	0
4th Floor					
4A	17	4	4	17	0
4B	18	0	0	18	0
4 South	14	3	3	14	0
3rd Floor					
3A	15	1	1	15	0
3B	17	1	1	17	0
Psychiatric Ward					
2 South	10	2	1	10	0
3 South	13	3	2	13	0
Telephone Operators	2	0	0	0	0
X-Ray	32	4	3	32	0
Total Number	605	99	59	416	31

lococci resistant to penicillin, the number of individuals having patient contact, and finally, the number of individuals with no patient contact but colonized with coagulase positive staphylococci. The percentage of coagulase positive carriers who harbored penicillin resistant staphylococci in the nasal area was 59.6% (59/99).

The highest incidence of coagulase positive carriers was found in the kitchen (13/57) while the lowest incidence was section 4B of the fourth floor (0/18) which attends mainly to cardiac patients.

The highest incidence of penicillin resistant staphylococci was found on the sixth floor (7/7) while the lowest incidence was observed in the business office (1/6).

The areas of the hospital personnel having the most patient contact were found to be on the 3rd floor (32/32), 4th floor (49/49), the fifth floor (50/50) and the sixth floor (31/32). Respectively, these areas showed an incidence of coagulase positive carriers of 2/32, 7/49, 6/50, and 7/32.

The areas of the hospital having the least patient contact were administration (0/8), maintenance (0/13), medical records (0/16), laundry (0/17) and the business office (0/21). Respectively, these areas showed an incidence of coagulase positive carriers of 0/8, 3/13, 2/16, 4/17 and 6/21.

Table II shows the results of phage typing done by Kentucky and the Center for Disease Control in Atlanta. Of the 99 coagulase positive organisms isolated, 48 were typable. No specific patterns were observed.

Statistical evaluation concerning patient contact versus enhancement of colonization of all departments in the hospital again showed, as in our preliminary study, no significant difference ( $P > .05$ ) using the Chi square method of evaluation.

Statistical analyses were also performed on the remaining questions asked of the personnel at the time of sampling. The length of employment at St. Joseph Hospital, the total number of years employed under a hospital environment, previous staphylococci infection, immediate sickness with staphylococci or position at St. Joseph did not influence or enhance colonization ( $P > .05$ ).

Table II

Phage typing results of coagulase positive staphylococci

Department	Typable Phage	Non-typable Phage
Business Office	55/71	4
Emergency Room	29/6/83A/85 3A/3C/71	4
CCU	0	1
Housekeeping	52A D11 79 3A WH1 77 79	
ICU	3A/3C/55/71	1
Kitchen	3C 79/83A/84/85/53 187 47/53/54/75/ 77/83A/84	9
Clinical Laboratory	52/52A/79/ 83A/85 6/47/77 79/42E/54/D11 6/47/53/86/D11 29/79 53 80/29/52/52A/79	5
Maintenance	29/52/80 3C/55/71 54/83A/85	0
Medical Records	0	2
Laundry	29/52 47/54/86/D11	3
Nursing Service	71	1
Pharmacy	0	1
Respiratory Therapy	47/54/86/88/D11	1
Surgery	83A/84 80 42E/47/53/54/ 77/86/D11	3
6th Floor	3A/3C/56/71 52/52A/80/81 53	4
5A	3C/71	2
5B	0	2
55 (Mat)	6/47/53/54/75/83A	
4A	71 52/81 3C	1
4 South	3A/3C/71 29/52/52A/80	1
3A	0	1
3B	0	1
2 South	0	2
3 South	47/53/54/75/83A/85 52/52A/80	1
X-Ray	81 187 42E/47/54/75	

### Summary

Statistical analysis was performed to see if there was any correlation between years of residence at St. Joseph Hospital, and acquiring some type of illness caused by staphylococci.



Significance was observed ( $P < .05$ ). However, no significant difference ( $P > .05$ ) was obtained when total number of years under a hospital environment versus illness caused by staphylococci was evaluated.

Analysis was also performed to determine what enhances the colonization of a penicillin resistant staphylococci in the nasal area. Evaluations were performed for all questions answered. It was found that patient contact significantly ( $P < .05$ ) increases the chance of obtaining such a colonization.

Statistical evaluations were performed to determine what characters were needed to influence hospital personnel in obtaining colonization of coagulase positive staphylococci in the nasopharyngeal area. It appears from this data that patient contact, length of employment in hospitals, previous infections with staphylococci or position at St. Joseph did not influence such colonization. However, it was found that chances of obtaining a staphylococci infection

is increased with years of residence at St. Joseph, and that the possibility of obtaining a penicillin resistant staphylococci in the nasal area was greatly influenced with patient contact.

### Acknowledgements

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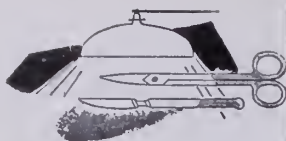
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# GRAND ROUNDS



The University of Louisville School of Medicine

This Journal feature will be presented alternately by the University of Louisville and the University of Kentucky Departments of Medicine and Departments of Surgery. We hope to have these features revolve around subjects of immediate practical interest to the practicing physician; and, for those of us not able to attend grand rounds in the teaching centers as often as we might, we hope this will represent a bit of a refresher course.

## Urologic Complications Following Abdominoperineal Resection of the Rectosigmoid

**G**ENITOURINARY complications are a major cause of invalidism after abdominoperineal resections of the rectosigmoid. Because of the age of the patients, the site of lesion and the extensive surgical dissection required for treatment, this procedure is associated with a significant incidence of major urologic complications. Surgeons have been aware of this distressing, and at times grave, situation since Miles popularized one-stage abdominoperineal resection.<sup>1</sup> The statistical incidence of urologic complications reported in the literature suggests a high rate of complications, perhaps in as many as 80% of the patients undergoing such operations.<sup>2</sup> This situation is of great clinical importance and requires a definite urologic management plan.

### Review of Cases

To evaluate the problem at our institutions we studied all the records of 100 consecutive patients who underwent abdominoperineal resections of the rectum for various pathologic processes between 1963 and 1973. Table 1 gives the number of patients treated at each of the hospitals and shows the sex distribution. Table 2 shows the distribution of various pathologic processes necessitating abdominoperineal resections of the rectum. Case reports of two of the patients seen at Veterans Hospital are described below.

The first patient was a 62-year-old white male admitted to hospital with rectal bleeding. He was found to have adenocarcinoma of the rectum and underwent abdominoperineal resection. The operation was complicated by an inadvertent tear in the posterior bladder wall which was repaired. Dur-

ing the perineal portion of the resection, the membranous urethra was lacerated and repaired over a Foley catheter. The postoperative course was complicated by prolonged urinary retention thought to be attributable to flaccid neurogenic bladder (on cystometrogram) and urethral stricture (on cystoscopy and urethrogram). He was readmitted to the hospital two and a half years later with acute urinary retention and found to be severely anemic and azotemic. Excretory urogram at this time showed a nonfunctioning left kidney with hydronephrosis on the right side caused by obstruction of the lower ureter. A month later right cutaneous ureterostomy was performed with functional improvement of the right kidney. The etiology of this obstruction could not be confirmed but is believed to have resulted from metastatic disease from his primary neoplasm. Tomograms of the sacrum suggested metastasis.

The second patient was a 78-year-old white male admitted to hospital with chills, fever, and rectal bleeding. He was treated for pneumonia but was also found to have adenocarcinoma of the rectum. Abdominoperineal resection was carried out and the final pathology report confirmed adenocarcinoma of the rectum (Duke B). Postoperatively he developed overflow urinary incontinence. Cystoscopy and cystometrogram suggested a flaccid neurogenic bladder. Treatment consisting of catheter drainage for one month followed by Urecholine (10 mg tid) was unsuccessful. Transurethral resection of the prostate and bladder neck was performed to decrease outflow resist-



ance. Histopathologic studies of the resected tissue showed fibromuscular hyperplasia. After transurethral resection, the patient's urinary function stabilized, but 300 cc residual urine was carried in the bladder. He was readmitted to Veterans Hospital 15 years later with a mass in the left groin; biopsy of the mass revealed metastatic adenocarcinoma. During this admission he had few urinary symptoms, but the urine showed infection, and 250 cc residual urine was carried in the bladder. Acid phosphatase measured 4.1 K.A. units, with a prostatic fraction of 2.9. The patient underwent transurethral resection of the prostate, and examination of tissue showed adenocarcinoma of the prostate. Review of slides of groin tissue showed metastatic adenocarcinoma consistent with prostatic origin. Good results have been obtained with hormone therapy in this patient.

**Table 1**  
Hospital and Sex Distribution

	Males	Females
Louisville General	23	15
Veterans Administration	61	1
<b>TOTAL</b>	<b>84</b>	<b>16</b>

### Complications

A total of 75 urologic complications were encountered in 52 patients. **Urinary retention** in some degree was the most common complication after abdominoperineal resection. Thirty-nine patients developed this problem. Urologic investigations (IVP, cystoscopy, cystometry) were carried out resulting in subdivision of these patients into three categories.

**Prostatic Obstruction** was thought to be the causative factor in 20 patients. Thirteen of these were managed by prostatectomy. Two patients were found to have adenocarcinoma of the prostate. At times it is difficult to differentiate between carcinoma of the rectum and carcinoma of the prostate invading the rectum. Complete urologic evaluation including determinations of acid phosphatase content of blood and tumor tissue may be needed to make a definite differential diagnosis. As the therapies for cancer of the prostate and cancer of the rectum differ markedly, no doubt should be left about the diagnosis. Rectal examination is the only way an early prostatic cancer is detected. After abdominoperineal resection, this method is no longer available.

**Table 2**

Disease Process Requiring Abdominoperineal Resection	Number of Patients
Adenocarcinoma of the Rectum	79
Squamous Cell Carcinoma of the Rectum	6
Ulcerative Colitis	5
Villous Adenoma	3
Others	7
<b>TOTAL</b>	<b>100</b>

**Urethral strictures** were found in five patients. Three needed intermittent urethral dilatation and one underwent internal urethrotomy. The fifth patient required ileal conduit urinary diversion because of upper urinary tract dilatation.

**Neurogenic bladder dysfunction** was thought to be the cause of retention in 14 patients. Three of the patients in this group were female. All of these patients were treated conservatively with prolonged catheter drainage, treatment of infection and Urecholine (bethanechol) therapy. Six male patients underwent transurethral resection to decrease the resistance to the urinary flow. All the patients in this group, whether treated conservatively or by transurethral resection, required prolonged and close follow-up care. Six patients required permanent catheter drainage.

Three theories explaining the vesical dysfunction following abdominoperineal resection have been suggested:

(1) **Direct injury to the vesical nerve supply** may be one cause of this complication. The bladder is supplied by parasympathetic (S2-3-4) as well as sympathetic (presacral) nerves. The parasympathetic nerve supply generally is considered the only nerve supply essential for normal micturition. Bladder function may be dependent upon the coordinated action of the sympathetic and parasympathetic nerves.

Simmons, after numerous abdominoperineal resections in cadavers, found that some degree of injury to the parasympathetic supply to the bladder is inevitable.<sup>3</sup> Injury to the sympathetic nerves is unlikely because of their position. Simmons concluded that bladder dysfunction following abdominoperineal resection is attributable to this imbalance of innervation

**Table 3**  
Ureteral Obstructions

	Number of Patients
Partial Obstruction	4
Total Obstruction	2
Bilateral Obstruction	3
Ureteroperineal Fistula	1

and advocated presacral neurectomy to wipe out the sympathetic side of the balance. Although good results were obtained in a few clinical cases, the validity of this hypothesis has not been proved.

(2) **Loss of support** produces sagging of the bladder after abdominoperineal resection. This anatomic derangement also has been implicated in bladder dysfunction. Some surgeons routinely fix the bladder to the anterior abdominal wall by suprapubic cystotomy or simple sutures, claiming a diminished incidence of bladder dysfunction.

(3) **Traumatic aseptic pericystitis** has been suggested as a cause of postoperative vesical dysfunction. Campbell found marked edema and fibrosis of perivesical space in four patients who underwent suprapubic cystotomy, up to four weeks after the abdominoperineal resection.<sup>2</sup> This pericystitis caused the bladder wall to be rigid and unable to contract effectively.

**Bladder injury** is another category of urologic complications following abdominoperineal resection. Two patients in our series developed vesicoperineal and vesicovaginal fistulas. Undoubtedly the bladder was entered more commonly, but the primary repair resulted in healing and not in further complication. These two fistulas resulted either from inability to recognize the bladder perforation or ischemic damage to the bladder wall.

Urinary bladder injuries are easy to recognize. If there is doubt, however, cystogram can be performed to rule out any extravasation of the contrast material. If treated expeditiously with drainage and repair, the morbidity is minimal.

**Ureteral obstruction** occurred in ten patients in this series. **Injury to the ureter** may be recognized during the operation or may go unrecognized (Table 3). Of three patients with bilateral obstruction, one required ileal conduit urinary diversion. Left nephrostomy was performed in another, but this patient died postoperatively. Bilateral obstruction in the third patient was relieved after incision and drainage of a large pelvic abscess.

One patient with a ureteroperineal fistula was treated with prolonged ureteral catheter drainage but required nephrectomy because of persistence of the fistula.

Two patients were found to have unilateral nonfunctioning kidneys in postoperative uro-

grams, but no further treatment was carried out. Neither patient had clinical evidence of urologic injury at the time of operation.

A cutaneous ureterostomy relieved the obstruction in another patient. The etiologies of these ureteral obstructions varied from patient to patient as pre- and postoperative urograms were not available in all the cases. It was difficult to distinguish whether recurrent malignancy, fibrosis or direct surgical interference was the definite etiologic factor.

Posterior **urethral injury** is probably not very uncommon during the perineal portion of the dissection, but because of the universal catheter drainage in these patients, it does not cause any major problem. After a time, urethral stricture may result, possibly a result of urethral injury or prolonged catheter drainage. Urethroperineal fistula was observed in two patients, and five patients developed urethral strictures, symptomatic enough to require urologic care.

**Sexual morbidity** among our patients could not be completely evaluated because of the lack of information in our records. Some researchers consider impotence a universal complaint following abdominoperineal resection of rectosigmoid.<sup>4</sup>

In our series, only two male patients returned to the hospital with loss of sexual function (impotence). Both of them were dismissed as having psychologic problems unrelated to the disease or surgical therapy. Impotence may be attributable to loss of nerve supply to the vessels and muscles controlling erection in the male.

An interesting aspect was pointed out by Devlin et al., who reviewed their British experience and found two homosexual males who underwent operations for anorectal cancer. One committed suicide and the other, when interviewed, commented, "You should not do it to us gay people."<sup>5</sup>

## Conclusion


Whether a patient returns to a normal comfortable life following abdominoperineal resection often depends upon urinary tract complications. This demands that a definite plan of urologic investigation be included in the management of the patients.

MOHAMMAD AMIN, M.D.

HANS-UDO EICKENBERG, M.D.

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## SPECIAL ARTICLES

### How Do We Measure Up?—Health Costs†

LOWELL H. STEEN, M.D.\*

**I**N recent years the cost of health care has been the foremost topic of conversation from the halls of Congress to the locker rooms of all of the factories, stores and shops in this country. Everyone has an interest and everyone has an opinion. We, as physicians, have been repeatedly indicted as the persons responsible for the entire problem that faces us now. We must first recognize that there is a grain of truth in what is said, for we do have a significant and powerful influence on the utilization of health facilities and resources. The ever increasing use of our health resources is easily measured in terms of the total dollars expended. Therefore, the focus has become critical.

There was a time when each patient who consulted his doctor expected of his physician relief of pain, cure of his illness or reassurance that all would be well. Each patient had implicit confidence and faith in his own doctor. He had no subsidies with which to pay other than his own personal resources, and perforce his own resources limited his expenditures to the bare necessities, which had a cost levelling influence. However, with the passage of time, the rapid growth of health insurance plans, and more recently involvement of the federal government in health care financing, many economic barriers have been removed. As John S. Millis of the famous Millis report said, "If we were to give all the people money enough to buy all the bananas they want, they would buy bananas, and even though the supply of bananas would eventually run out, the public still would demand their bananas. Their demand would become a need and soon they would declare they have the right to bananas."

As a nation, we have promised quality health services as a basic right in over 50 pieces of federal legislation, and we have even started to devise a system to pay for it, but we have not educated the public to the appropriate use of these services and facilities. Likewise, our education program for physicians is by no means complete since there remains a small percentage of our fellow physicians who overutilize in- and out-patient facilities and whose charges, if not exorbitant, are by no means in consort with our concept of the usual, customary and reasonable philosophy. I predict that the federal government will soon embark upon another program of issuing plastic credit cards to every man, woman and child in this country which they will be encouraged to use at will and for which they will never receive a statement at the end of the month. **This will further increase the cost of health care, both per unit and in toto!**

I think first in all fairness, in a discussion such as this which has so many ramifications, we must assume and accept a basic fact that health care costs have increased and will continue to increase. I think we must recognize that physicians do play a role in these costs. I further believe implicitly that physicians have taken a position of leadership in the war of cost containment to a far greater degree than have our federal and state legislators, to an infinitely greater degree than have union leaders, and we are far more conscious of cost in our treatment of the patients than is the patient. The health insurance industry has helped little—neither Blue nor commercial. In the AMA Green Sheet last week the Cost of Living Director was quoted as follows: "The health field has been persistently among the most inflationary areas in our economy, and I am sure it is our goal to alter this trend. In a letter to the President, Doctor Kernodle pointed out that 'physicians'

†Presented at the 1973 KMA Interim Meeting, March 29, Lake Barkley State Park, Cadiz

\*Hammond, Indiana. Chairman, AMA Committee on Community Health Care.

fees rose only 1.7% under Phase 2' and that in the past year 'physicians' fees have not been an inflationary factor in health care costs.'” (See *AMA Newsletter*, 1-15.) In spite of this apparently superb track record, how do we measure up? I shall attempt to outline for you briefly, not all, but many of the important areas in which the physician has exercised a leadership role in attempting to reverse the ever upward spiralling cost of health care. And I say parenthetically that I believe to date we can begin to see the impact of this activity by some small levelling off of the curve. The *AMA Newsletter* of 3/19/73 said: “Down, not up, is the direction of the average physician's charges for services under Medicare, according to Social Security Administration data published in *AMA Update*. Figures from the beginning of Medicare in 1966 through 1971 show average charges by physicians to be down 5.2% for surgical services and 11.5% for medical services. Average hospital charges per day have gone up 83%. Average charges in July, 1966, were: Surgeons, \$174 per procedure; medical services, \$52; hospitals, \$47 per day. In December, 1971, they were: Surgeons \$165; medical services, \$46; hospitals \$86. Figures for 1972 are not available.”

First of all, each and every practitioner of medicine has made very significant changes in his mode of practice in the past ten years. He has made increasing use of out-patient facilities for diagnostic studies and for minor procedures that can be done outside the hospital. Physicians collectively spend untold hours annually on audit committees to eliminate unnecessary work; through our bed utilization committees to shorten the average hospital stay and to discourage unnecessary admissions to our hospitals. We have experimented in innovative out-patient delivery systems and surgicenters are emerging in various parts of the country. These activities have provided access to greater numbers of people and have decreased unit costs. The physician's willingness to reduce length of stay in the hospital has alone accounted for millions of dollars annually, and this has been an across-the-board activity involving every discipline of medicine. To cite one example, when I first started into the private practice of medicine 20 years ago, we hospitalized myocardial infarctions for 30 days, and today in the

institution in which I work, our average stay is 18 days; and our goal is 14 days.

Some of the aforementioned activities come under the generic heading of “peer review.” As you all know, peer review encompasses the entire field of the quality, the quantity and the cost of medical care. Peer review was not dreamed up by some starry-eyed liberal legislator, but was an innovation of the medical profession and has recently achieved great notoriety; yet from the beginnings of recorded medical history, unstructured and poorly documented peer review was practiced. The first physician in antiquity who sought the advice and consultation of his fellow physicians indeed should be credited with the concept of peer review, for this is indeed peer review in its most elemental form. Sufficient evidence is not available to document all the things we have said, although as the techniques of peer review are refined and more widely practiced, I am convinced that this single exercise will have been the prime determinant in controlling the overall cost of medical care.

Physicians have been instrumental in introducing the computer into medical practice. It is used for storing of historical data and this data is constantly available. The computer is used regularly for the monitoring of physiological parameters. Patient survival can be predicted on data fed to the computer bank. There are myriad applications to peer review. Electrocardiographic interpretation is accessible to remote areas via computer at a reduction in the cost of interpretation per electrocardiogram. One can cite untold examples of the applications of computers to medicine where there have been cost savings in which physicians pioneered. To cite a concrete example, at St. Luke's Hospital in Denver, Colorado, my friend Robert Elliott, M.D., informs me that in 1969 in the Denver area hospitals, 120,000 electrocardiograms were processed manually and they projected a 12% annual increase for this diagnostic procedure. They centralized and automated their electrocardiographic diagnostic services, and although their break-even point is 300 ECG's per day, further increases in their daily processing volume has offered further economy—a scale that cannot be duplicated by conventional ECG systems. A by-product of this system is that cardiologist manpower sav-



ings up to 75% have been effected by placing this automated system in series with a rotating panel of cardiologists representing all of the participating hospitals. The implication of this statistic is clear. Given a sufficient volume of ECG's, recent technological developments make it possible not only to reduce unit costs, but to effect an appreciable savings in medical manpower, also.

So, again, we ask our primary question, "How do we measure up?" It would appear at first blush that we are knights in shining armor. We all know that is not true. There is much left to be done. All that we have done in the past we must continue to do more of. We must intensify our efforts. We must increase the number of functioning peer review units and coordinate all of the data that is generated into central files so that we can document and evaluate costs. We must introduce the unit cost concept, and although difficult, this concept needs to be refined for all medical procedures and techniques. We must begin to think in terms of cost benefit ratios and thereby evaluate critically what we do day by day. We must, through peer pressure, seek conformity of the non-conformist. Lest I be misunderstood, I do not suggest that we should attempt to practice medicine by a "cookbook." All I say is that we must get the most for each health dollar spent. And we do have the responsibility, in my judgment, to establish standards of care which will, perforce, vary from region to region, from discipline to discipline. By establishing some reasonable conformity to an acceptable standard, we can have immeasurable impact upon the total cost of care.

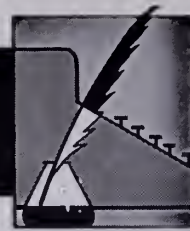
Although we have been directly responsible for increase in the total dollars expended in health care through introduction to many expensive procedures such as open heart surgery, organ transplants, renal dialysis, the coronary care unit and the intensive care unit among many others, we have contributed to the increased longevity of the population of the United States. We have thereby created a new problem for ourselves by increasing this longevity, making these same individuals susceptible to chronic, expensive disorders for which we must now find new solutions to the containment of costs. It now is our beholden duty to be innovative in reducing the total cost of these illnesses.

How do we measure up? Well, I suppose it depends upon how and from where you look at what has been done and what is left to do. I rather imagine as a physician one could think of the charges made against us by our adversaries; one could think of the heroic and monumental tasks that lie ahead, and we could indulge in self pity. Some wag once said, "The only thing to be said about self pity is that it's sincere." I cannot believe that physicians individually or collectively will resort to self pity. I know no way of estimating, and I have been unable to find any estimate of, the physician impact on cost containment, but since there are no other experts in this field, I can speak with considerable authority. I would offhand think that we have done about 60% of what there is to do. The remaining 40% remains for us to get done—and I am sure we will.

How do we measure up? Damned good!



## EDITORIALS



### PSRO — One Opinion

**P**ROFESSIONAL Standards Review Organization is the mechanism by which the Federal government will approve payment for hospital and nursing home care of patients insured by Medicare and Medicaid. This activity must be in operation in 1975 which seems to leave insufficient time to create it or even decide if it is possible, much less if it is desirable or monstrous.

Under the new rules, hospital care of sick patients will become unnecessarily cumbersome. The patient's diagnosis must be established and we can hereafter disregard the inconvenient fact that a lot of our energy will be spent in trying to establish just that. When we have a patient and diagnosis we submit this to the PSRO for its decisions. Will hospitalization be allowed? If so, how long a stay will be permitted? What diagnostic maneuvers will be paid for, what therapies will be approved, what diagnostic maneuvers and therapies are required to protect the patient from "under-utilization"? Now, it will be okay for a particular patient to deviate from the PSRO's punch card criteria; all the doctor has to do is explain why, and he will have plenty of time and inexpensive, efficient secretarial help for writing letters of explanation.

This system developed, and operation could become a burdensome, time-consuming obstruction to the care of the sick. The necessity for daily records inspection will introduce new clerical crowds at the nurses station and seriously intensify the unsavory invasion of the patient's privacy. Again, the unprofessional duty of explaining to the patient why he is not receiving what his government promised him will fall on the physician.

But the immediate problem is even more ironic. The criteria for every human illness must yet be established. Every diagnosis must

have necessary, permissible and prohibited laboratory studies, x-ray procedures, therapies and lengths of hospital stay established in order to approve or disapprove each diagnosis of each patient. This must be done separately in each region of each state. In all the regions, the practicing physicians are congregating in committees to execute the criteria so that they will be fair and to forestall the government's doing it unfairly.

So, in a period of 1-1/2 years, countless groups of practitioners are supposed to create the equivalent of regional textbooks of medicine, surgery, pediatrics, radiology, pathology, obstetrics, psychiatry, gynecology, orthopedics, neurology, urology, ophthalmology, otorhinolaryngology, physical medicine and rehabilitation sufficiently succinct and correct that a computer can yes—no every monetary charge that accumulates on every bill of every patient in every hospital. This has not been so very well accomplished by the scholars who have devoted their careers to the creation of honest, inclusive professional textbooks but now those who have depended on such for learning are obliged to try to create their own.

And after the task is neatly completed and the few kinks ironed out, the same practitioner will have the privilege of applying to the PSRO for approval of patient care which does not coincide with the criteria that he developed himself. The honored principle has been applied again: Physician, betray thyself.

Even so, organized medicine is exerting huge and immediate energy to comply with the legislation and is trying to construct some practical function into this structure. One hopes the government will appreciate this and in turn, try to cooperate with us.

We need all the help we can get!

AEO



## PSRO — Another Opinion

**T**HE Kentucky Foundation for Medical Care has been struggling with the problem of PSRO since its passage in October of 1972. Doctor Overstreet, in his comments, has called attention to the governmental monstrosity that has been designed for the Health Care industry. It is quite true that in the minds of most physicians, and even more so, in the minds of the Directors of the Foundation, this will be, in fact, another bureaucracy. However, there is one point which seems to have been missed and that is that Professional Standards Review Organization is a law. Through the efforts of the AMA, (which opposed PSRO legislation for two years), physicians have been allowed to set up PSRO's. This, in the minds of many of us, is the best compromise we could obtain, for certainly physicians are the most qualified to judge the quality of medical care.

The law is to become effective in January, 1974, and the PSRO designate will have until January, 1976, to prove its effectiveness. Contrary to Doctor Overstreet's opinion as to lack of manageability and the cumbersome nature of PSRO operation, these problems have been faced squarely by the Foundation Board. The Foundation's Board of Directors feels that we have a workable plan, one which will alter the individual's practice of medicine to a minimum degree, if at all. The Foundation has, as you know, applied for a designation as a state-wide PSRO and within the confines of the law will operate along the lines of our previously established peer review mechanism. Naturally, this sort of operation will require more day to day physician participation, but the benefits of increased quality, public relations, reduction of cost of hospitalization by elimination of over-

utilization, not to mention the benefits individual physicians will derive in medical education, seem to offset, in our minds, the amount of work involved.

Under this system of PSRO operation, physician involvement will be kept at a level necessary for *proper* utilization. Once methodology has been established and has become familiar to all physicians, it is hoped that PSRO will consume a small degree of your time. It will, by necessity, involve a system of non-professional personnel whose duties will not be that of making medical decisions, but rather following established guidelines with no interference in the actual physician-patient relationship. The Government has seen fit to decree the use of this system so the Foundation Board of Directors has felt obliged to follow its edict.

Norms of care are already a part of our peer review mechanism and only expansion of these norms by our physician members needs to be done. Kentucky has been a leader in this field and through use of the KMA Interspecialty Council, this expansion should not prove to be an over-burdensome task.

Admittedly, the job of establishing the ground work for the PSRO mechanism in Kentucky is a large one. However, most physicians are not of a mind to shirk their duties or obligations. Since PSRO is now a law of the land, in the minds of the Foundation's Board, PSRO falls in the category of duty and obligation. The responsibility for its efficient management lies squarely in our hands. It is hoped that each of you will have input into its formulation. Each of you will certainly be affected.

DAVID A. HULL, M.D., PRESIDENT  
KENTUCKY FOUNDATION FOR MEDICAL CARE

*NOTE: The above editorial comments are presented to help bring to the KMA readership a pair of contrasting views of the PSRO legislation and the KMA response to it. Your editorial staff will be interested in any letters you may have commenting about any aspect of the PSRO legislation; we invite your participation in our "Letters" column.*



## ORGANIZATION SECTION



### 1973 KMA Annual Meeting Is "Around the Corner"

The scientific program of the 1973 KMA Annual Meeting will get underway Tuesday morning, September 18 with presentations on "Critical Care Medicine." All general sessions will be held in the Bluegrass Convention Center in Louisville (at the intersection of I-64 and Hurstbourne Lane).

Other topics to be discussed during the three-day session will be "Pollution," "Renal Problems" and "Sex and Its Consequences."

The President's Luncheon, to be held at 11:50 a.m., Wednesday, September 19 in Belle Hall at the Bluegrass Convention Center, will feature Robert H. Henry, Director of Professional Affairs of the U.S. Pharmacopeial Convention. Mr. Henry's topic is "The U.S.P.—Give It To The Elephants." KMA award presentations and the installation of the 1973-74 KMA President, Fred C. Rainey, M.D., will also highlight this year's President's Luncheon. Tickets will be on sale at various locations at the Ramada Inn and Bluegrass Convention Center.

Sixteen specialty groups will meet on Tuesday and Thursday afternoons at 2 p.m. Meeting on Tuesday, September 18, will be the groups representing anesthesiology, chest medicine, orthopedics, pediatrics, plastic and reconstructive surgery, radiology, surgery and urology. Groups representing dermatology, family medicine, industrial medicine, internal medicine, obstetrics and gynecology, psychiatry and public health will meet on Thursday, September 20.

The House of Delegates will meet on Monday, September 17 at 9 a.m. at Ramada Inn and again on Wednesday, September 19 at 7 p.m. at Bluegrass Convention Center.

Other features of the 1973 Annual Meeting include an Orientation Program for new members on Wednesday, September 19; the annual Convention of the Woman's Auxiliary to KMA on September 17-19; the KEMPAC Seminar on Monday evening, September 17 and many alumni reunions of the University of Louisville School of Medicine.

Complete details of this year's Annual Meeting are featured in the August issue of *The Journal of KMA*.

### Ky. MECO Program Places 67 Students This Year

The Kentucky MECO (Medical Education and Community Orientation) Program has placed 67 pre-clinical medical students in hospitals, clinics and private practices throughout Kentucky during the sum-

mer of 1973. Last year positions were secured for six students. Having the support of the Kentucky Medical Association, the Kentucky Hospital Association, the Kentucky Academy of Family Physicians, Blue Cross and Blue Shield and Kentucky's two medical schools, Kentucky's MECO Program has expanded to provide students an opportunity to spend eight to ten weeks learning about a community's total health care system.

Physicians participating as program directors this year are:

Oris Aaron, M.D., Columbia  
John M. Allen, M.D., Lexington  
George S. Beard, M.D., Hartford  
Joseph R. Boggess, M.D., Greenville  
Maurice Bowling, M.D., Owenton  
James Brashear, M.D., Central City  
Paul T. Brizendine, M.D., Louisa  
Harold L. Bushey, M.D., Barbourville  
Keith Cameron, M.D., Ary  
Glenn D. Cardenas, M.D., Maysville  
George C. Cheatham, M.D., Greensburg  
Lee R. Chutkow, M.D., Louisville  
Carl Cooper, Jr., M.D., Bedford  
Bennett L. Crowder, M.D., Hopkinsville  
Lewis Dickinson, M.D., Glasgow  
V. F. Duvall, M.D., Clarkson  
W. Gerald Edds, M.D., Calhoun  
R. W. Fidler, M.D., Flemingsburg  
S. H. Flowers, M.D., Middlesboro  
Herbert B. Francis, M.D., Covington  
James A. Freeman, M.D.,  
Dawson Springs  
Ronald Garvin, M.D., Louisville  
F. P. Giannini, M.D., Princeton  
Herbert Harkleroad, M.D., Bowling Green  
John W. Harrison, M.D., Ashland  
John Hemmer, M.D., Louisville  
Vertrees Hollingsworth, M.D.,  
Georgetown  
Becky John, M.D., Hazard  
Robert T. Johnson, M.D., Beaver Dam  
H. B. Keister, M.D., Mayfield  
James F. Kurfees, M.D., Crestwood  
John A. Logan, M.D., Henderson  
Dan A. Martin, M.D., Madisonville  
James W. Morris, M.D., Burkesville  
Harvey Page, M.D., Pikeville  
William D. Pratt, M.D., McDowell  
H. David Rosdeutscher, M.D.,  
Bowling Green  
Nat Sandler, M.D., Lexington  
John W. Simmons, M.D., Monticello  
Glenn R. Stout, M.D., Louisville  
Juan F. Ulanday, M.D., Danville  
H. M. Vandiviere, M.D., Lexington  
Fred W. Wampler, M.D., Williamson,  
W.Va.

### Licensure Article in JAMA

The editors of *The Journal of KMA* would like to call attention for those interested in medical licensure and the changing pattern of medical education to an article published in the July 23 issue of *JAMA* entitled "Evaluation, Certification and Licensure in Medicine." The article encompasses the conclusions and recommendations of the Committee on Goals and Priorities of the National Board of Medical Examiners for a long-range plan that includes educational achievement examinations during medical school.



## Louisville Attorneys Retained As KMA Legal Counsel

The Board of Trustees has, effective July 1, 1973, retained the services of Stites, McElwain and Fowler, Louisville attorneys, to act as legal counsel for KMA.

Mr. Carl Wedekind, a member of the firm, has been assigned to the KMA account and he will be assisted by other firm members in his role as counsel for KMA.

In authorizing the change in legal counsel for KMA, the members of the Board of Trustees voted that a Louisville firm be retained which would be in close proximity to the KMA Headquarters Office to service KMA's increasing needs. The Louisville firm also has an additional office in Frankfort.

## Miscellaneous Meetings Planned During KMA Annual Session

Several miscellaneous meetings have been scheduled during the KMA Annual Session. The time, date and place of meeting planned at press time are listed below.

### Sunday, September 16

- 12:30 p.m. KMA Board of Trustees, Luncheon Meeting, Natchez Room, Bluegrass Convention Center

### Monday, September 17

- 9:00 a.m. KMA House of Delegates, Meeting, Jeffersonian Rooms, Ramada Inn  
12:30 p.m. Reference Committee Chairmen Luncheon, Majestic Room, Bluegrass Convention Center  
2:00 p.m. Reference Committee Meetings, Island Queen and Idlewild Rooms, Cincinnati Room, Eclipse Room, Grand Republic Room, Delta Queen Room, Natchez Room, Bluegrass Convention Center  
6:00 p.m. KEMPAC Reception, Seminar and Banquet, Banquet Area, Bluegrass Convention Center

### Tuesday, September 18

- 12:00 noon KMA Executive Committee and Reference Committee Chairmen Meeting, Mark Twain Room, Ramada Inn  
12:00 noon Kentucky Chapter, American College of Surgeons, Luncheon Meeting, Jeffersonian Room, Ramada Inn  
12:00 noon Kentucky Society of Pathologists, Luncheon Meeting, Magnolia Room, Ramada Inn  
5:30 p.m. Kentucky Society of Anesthesiologists, Social Hour, Delta Queen Room, Bluegrass Convention Center  
5:30 p.m. KMA—WA-KMA Reception, Poolside, Ramada Inn

- 7:00 p.m. Kentucky Chapter, American Academy of Pediatrics, Banquet, Banquet Area, Bluegrass Convention Center

- 7:00 p.m. Kentucky Chapter, American College of Radiology, Social Hour and Dinner, Enterprise Room, Bluegrass Convention Center

- 7:00 p.m. Kentucky Orthopaedic Society, Social Hour and Dinner, Sheraton Inn, Hurstbourne Lane

- 7:00 p.m. Kentucky Chapter, American College of Chest Physicians, Social Hour and Dinner, Grand Republic Room, Bluegrass Convention Center

- 7:00 p.m. Kentucky Urological Association, Social Hour and Dinner, Natchez Room, Bluegrass Convention Center

### Wednesday, September 19

- 7:30 a.m. Medical Advisory Committee of the Kentucky Society for the Prevention of Blindness, Breakfast, Louisville Room, Ramada Inn  
11:50 a.m. President's Luncheon, Banquet Area, Bluegrass Convention Center  
3:30 p.m. KMA Orientation Program, Grand Republic Room, Bluegrass Convention Center  
4:30 p.m. KMA Board of Trustees, Dinner and Meeting, Natchez Room, Bluegrass Convention Center  
7:00 p.m. KMA House of Delegates, Meeting, Banquet Area, Bluegrass Convention Center

### Thursday, September 20

- 10:00 a.m. Kentucky Diabetes Association Meeting, Grand Republic Room, Bluegrass Convention Center  
12:00 noon Kentucky Chapter, American College of Physicians, Luncheon, Magnolia Room, Ramada Inn (meeting with the Kentucky Diabetes Association)  
12:00 noon Kentucky Obstetrical and Gynecological Society, Luncheon, Jeffersonian Room, Ramada Inn  
12:00 noon KMA Board of Trustees, Luncheon Meeting, Majestic and New Orleans Rooms, Bluegrass Convention Center  
6:00 p.m. Kentucky Psychiatric Association, Social Hour and Dinner, Jeffersonian Room, Ramada Inn

### September 17-18-19

- All Day Class of '38 University of Louisville School of Medicine, Headquarters Room, Ramada Inn

# What's on your patient's face...

may be more important than his chief complaint

Patient P.T.\* seen on 3/29/67 shows typical lesions of moderately severe keratoses. Note residual scarring on ridge of nose from previous cryosurgical and electrosurgical procedures.



Patient P.T.\* seen on 6/12/67, seven weeks after discontinuation of 5% FU cream. Reaction has subsided. Residual scarring not seen except that due to prior surgery. Inflammation has cleared and face is clear of keratotic lesions.

\*Data on file, Hoffmann-La Roche Inc., Nutley, N.J





# The lesions on his face are solar/actinic— so-called "senile" keratoses... and they may be premalignant.

## Solar, actinic or senile keratoses

These lesions may be called by several names, but they usually can be identified by the following characteristics. The typical lesion is flat or slightly elevated, of a brownish or reddish color, papular, dry, rough, adherent and sharply defined. They commonly occur as multiple lesions, chiefly on the exposed portions of the skin.

## Sequence of therapy— selectivity of response

After several days of therapy with Efudex® (fluorouracil), erythema may begin to appear in the area of the lesions; this reaction usually reaches its height of unsightliness and discomfort within two weeks, declining after discontinuation of therapy. This reaction occurs in affected areas. Since the response is so predictable, lesions that do not respond should be biopsied.

## Acceptable results

Treatment with Efudex provides highly favorable cosmetic results. Incidence of scarring is low. This is particularly important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Multiple actinic or solar keratoses.

**Contraindications:** Patients with known hypersensitivity to any of its components.

**Warnings:** If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

**Precautions:** If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesion failing to respond or recurring should be biopsied.

**Adverse Reactions:** Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

**Dosage and Administration:** Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

**How Supplied:** Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).



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# This patient's lesions were resolved with

# Efudex®

# fluorouracil/Roche®

5% cream/solution...a Roche exclusive

## KET To Premiere Series In Fall on Feelings

Two new series dealing with feelings will premiere on Kentucky Educational Television this fall. A child-centered series, "Inside/Out," beginning on October 2, at 9:45 a.m., and its adult corollary, "Echoes of Childhood," beginning on September 25 at 7:30 p.m., will take a positive look at feelings and how to deal with them.

The State Departments of Mental Health and Education, along with Kentucky Educational Television, are co-sponsors of the "Echoes of Childhood" series which is intended to remind adults of their important role in the emotional growth and development of children.

## Louisville Groups Schedule Sex Education Seminar

The Greater Louisville Organization for Health, Inc. (GLOH) and the Louisville Area Family Planning Council, Inc. will sponsor a symposium and seminar on "Sex Education in Our Community" on October 13-14, 1973.

Held in the University of Louisville Health Sciences Auditorium, the seminar will feature speakers from the U of L Departments of Obstetrics and Gynecology and Family Practice and the Kent School of Social Work. Lecture presentations and workshops will deal with sex and drug education.

## Maternal Mortality Page

(Continued from page 566)

experience her greatest difficulty in the third trimester of pregnancy when cardiac output and blood volume are at a maximum. Cases of dissecting aneurysm of the aorta have been reported that are associated with coarctation of the aorta, but in others the cause is unknown. As stated by Reid, the onset and course of the disease are dramatic and overwhelming. Death comes rapidly following severe and sudden chest pain, shortness of breath and extreme weakness. Death has been known to occur for as long as two weeks following the onset of symptoms, but usually it is sudden. This is indeed a most unfortunate and unusual complication of pregnancy.

### Reference

1. Reid, Duncan E. Textbook of Obstetrics. W. B. Saunders & Co. Philadelphia, 1962, p. 817.

## Abdominoperineal Resection

Amin and Eickenberg

(Continued from page 596)

### References

1. Miles, W. E., A method of performing abdominoperineal excision for carcinoma of the rectum and terminal portion of the pelvic colon. *Lancet* 2:1812, 1908.
2. Campbell, M. F., Urologic complications of anorectal and colon surgery. *Am. J. Proctol.* 12:43, 1961.
3. Simmons, H. T., Retention of urine following excision of the rectum. *Brit. M. J.* 1:171, 1938.
4. Kickham, C. J. E. and Bruce, N. H., Urological complications in malignant disease of the rectum. *J. Urol.* 41:541, 1939.
5. Devlin, H. B., Plant, J. A. and Griffin, M., Aftermath of surgery for anorectal cancer. *Brit. M. J.* 3:413, 1971.

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High-level anticholinergic activity is maintained all day and all night in most patients with only two tablets every eight hours.

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**Vigorous anticholinergic action**—Pro-Banthine® Vials, 30 mg., are for intramuscular or intravenous use when prompt and vigorous anticholinergic action is required.

**Mild anticholinergic action**—Pro-Banthine® Half Strength, 7.5-mg. tablets, for more exact adjustment of maintenance dosage in mild to moderate gastrointestinal disorders.

**Indications:** Pro-Banthine is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

**Contraindications:** Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflux esophagitis, or unstable cardiovascular adjustment in acute hemorrhage.

**Warnings:** Patients with severe cardiac disease should be given this medication with caution.

Fever and possibly heat stroke may occur due to anhidrosis. In theory a curare-like action may occur, with loss of voluntary muscle control. For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted.

Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthine.

**Precautions:** Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

**Adverse Reactions:** Varying degrees of drying of salivary secretions may occur as well as mydriasis and blurred vision. In addition the following adverse reactions have been reported: nervousness, drowsiness, dizziness, insomnia, headache, loss of the sense of taste, nausea, vomiting, constipation, impotence and allergic dermatitis.

**Dosage and Administration:** The recommended daily dosage for adult oral therapy is one 15-mg. tablet with meals and two at bedtime. Subsequent adjustment to the patient's requirements and tolerance must be made.

**Pro-Banthine P.A.**—Each tablet of Pro-Banthine P.A. (propantheline bromide) contains 30 mg. of the drug in the form of sustained-release or timed-release beads; on ingestion about half of the drug is released within an hour and the remainder continuously as earlier increments are metabolized. Thus the result is even, high-level anticholinergic activity maintained all day and all night in most patients with only two tablets daily. Some patients may require one tablet every eight hours.

The contraindications and precautions applicable to Pro-Banthine 15 mg. should be observed.

**How Supplied:** Pro-Banthine is supplied as tablets of 15 and 7.5 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg.

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**Pro-Banthine®**  
brand of  
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## Placidyl® (ETHCHLORVYNOL)

### Brief Summary

**Indications**—Placidyl (ethchlorvynol) is indicated as short-term hypnotic therapy in the management of insomnia.

**Contraindications**—Drug hypersensitivity and porphyria.

**Warnings**—Not recommended during the first and second trimester of pregnancy. Caution patients of possible combined exaggerated effects with alcohol, barbiturates, tranquilizers or other CNS depressants. Exaggerated effects might result in blurring of vision, paralysis of accommodation and profound hypnosis. Caution patients concerning driving a motor vehicle, operating machinery, or other hazardous operations requiring alertness after taking the drug. ADMINISTER WITH CAUTION TO PATIENTS WITH SUICIDAL TENDENCIES AND DO NOT PRESCRIBE LARGE QUANTITIES OF THE DRUG. Adjustment of the dosage of oral anticoagulants might be necessary when beginning ethchlorvynol therapy, during therapy, or after stopping therapy. This drug is not recommended for use in children. PLACIDYL HAS THE POTENTIAL FOR THE DEVELOPMENT OF PSYCHOLOGICAL AND PHYSICAL DEPENDENCE. INSTANCES OF SEVERE WITHDRAWAL SYMPTOMS, INCLUDING CONVULSIONS AND DELIRIUM CLINICALLY SIMILAR TO THOSE SEEN WITH BARBITURATES, HAVE BEEN REPORTED IN PATIENTS TAKING REGULAR DOSES AS LOW AS 1000 MG. PER DAY OVER A PERIOD OF TIME WHEN THE DRUG WAS SUDDENLY DISCONTINUED. PROLONGED ADMINISTRATION OF THE DRUG IS NOT RECOMMENDED. Addiction-prone patients or those who are likely to increase dosages of the drug on their own initiative should be observed for evidence of signs or symptoms which may indicate possible early withdrawal or abstinence symptoms. Signs and symptoms associated with withdrawal and abstinence include unusual anxiety, tremor, ataxia, slurring of speech, memory loss, perceptual distortions, irritability, agitation and delirium. Other less well defined signs and symptoms, not necessarily due to withdrawal and abstinence, may include anorexia, nausea or vomiting, weakness, dizziness, sweating, muscle twitching and weight loss. Abrupt discontinuance of Placidyl following prolonged overdosage may result in convulsions and delirium.

**Precautions**—Toxic amblyopia has been reported with long-term continuous use of ethchlorvynol. Permanent visual defects have been observed, although amblyopia has improved after discontinuation of the drug. Drug dosage should be limited for elderly and debilitated patients to the smallest effective amount. If pain is present, this drug should only be given if insomnia persists after pain is controlled with analgesics. Caution is advised in prescribing the drug for patients who are being treated with either MAO inhibitors or antidepressants. Transient delirium has been reported with the combination of Placidyl and amitriptyline. Drug dosage should be reduced if prescribed for patients receiving MAO inhibitors or antidepressants. Caution should be exercised in patients with impaired hepatic or renal function. Patients who respond unpredictably to barbiturates or alcohol, or who exhibit excitement and release of inhibition in association with such agents, may also react in this way to Placidyl. Rarely, patients may exhibit symptoms suggestive of an unusual susceptibility to the drug; such as prolonged hypnosis, profound muscular weakness, excitement, hysteria, or syncope without marked hypotension. Transient giddiness or ataxia may occur.

**Adverse Reactions**—Hypotension, nausea or vomiting, gastric upset, aftertaste, blurring of vision, dizziness, facial numbness, and allergic reaction typified by urticaria have been reported following Placidyl administration. Mild "hangover" and symptoms of mild excitation have occurred in some patients. There have been rare reports of cholestatic jaundice occurring in patients taking ethchlorvynol. A few cases of thrombocytopenia have been reported in patients receiving ethchlorvynol. 304431

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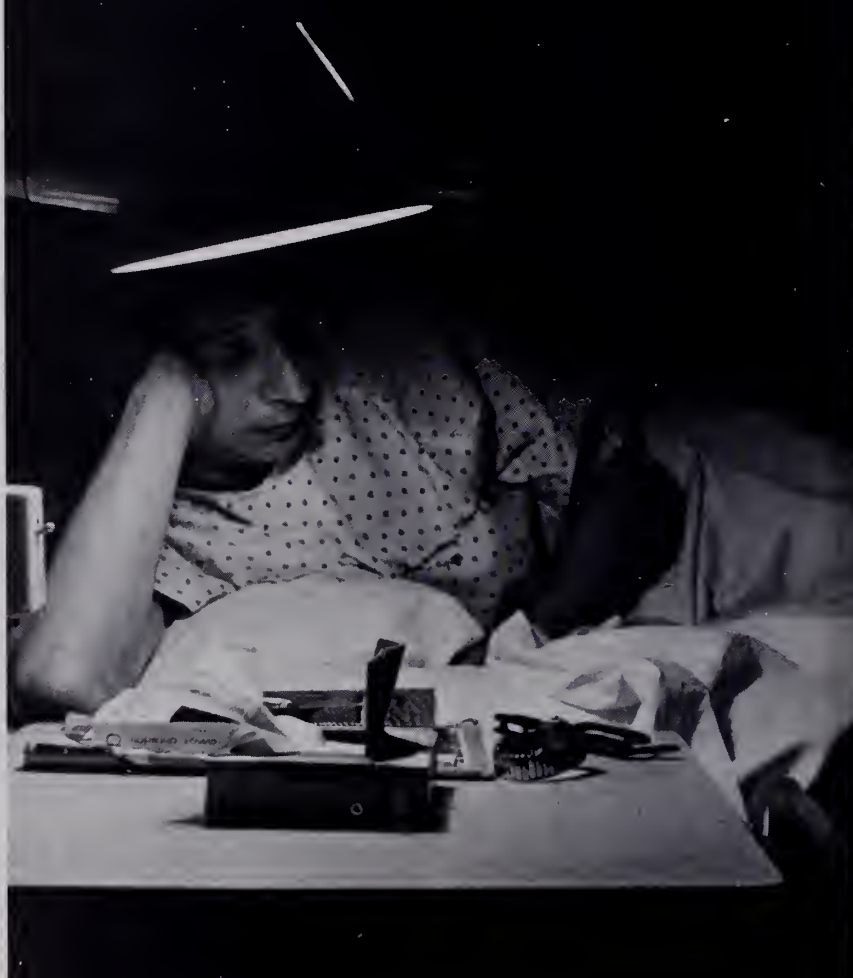
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**Council on Environmental, Occupational, and Public Health  
of the American Medical Association**

**Statement on Venereal Diseases**

Gonorrhea ranks first (excluding influenza) and syphilis third among the reportable diseases in the United States. During 1972, there were 767,215 gonorrhea cases reported, 14.5% higher nationally than the previous year and more than double the number reported in 1965. Increases have occurred in all parts of the nation and in all age and sex groups, but the largest concentration of cases is in the 15-24 year age group. Allowance for both under reporting and failure to diagnose all cases as they occur suggests that the actual occurrence of gonorrhea infection last year was about 2.5 million.

The Center for Disease Control estimates that the reservoir of gonorrhea includes 6 to 800,000 females and about 100,000 males that are asymptomatic. To help reduce this reservoir of silent carriers, most states have implemented gonorrhea screening programs for females. The Center for Disease Control reports that from July 1972 to March 1973 there were 3,117,022 females screened and 158,604 (5.1%) had a positive test for gonorrhea. Of 664,110 females tested in private physician offices throughout the nation, 2.5% had a positive culture for gonorrhea. The Council urges medical societies to promote gonorrhea culture screening among females.

During 1972, syphilis morbidity (all stages) exceeded 91,000 reported cases. The number of congenital syphilitics under one year of age numbered 383 in 1972. Reported cases of primary and secondary syphilis (the infectious stages) numbered 24,429, up 3% from the previous year, with an estimated 85,000 cases occurring annually. Because large numbers have escaped detection over the years, it is estimated that if every person in the United States could be tested for syphilis today, about 1/2 million previously untreated cases would be found.

An important procedure used to identify persons infected with syphilis or gonorrhea is laboratory reporting to public health authorities of those persons who have a positive test for either. The patient is contacted through his own physician for diagnosis and treatment if necessary. The following states do not have laws or health department regulations that require laboratories to report persons with positive VD tests to health authorities: Alaska, Idaho, Indiana, Louisiana, Maine, Massachusetts, North Dakota, South Dakota and Washington. Experience has shown that many laboratories refuse to report persons with a positive test for venereal disease to the health department until it is required by law or regulation. The Council recommends that medical societies in these states take appropriate action for the enactment of laws or regulations that require laboratories to report the positive venereal tests.

With the exception of Wisconsin, all the states now have laws or regulations permitting the treatment of minors for venereal disease without parental consent. It is believed, however, that some of the states' laws and regulations are so worded to make them

inadequate. Also, some of the states might improve their laws by broadening the age group definition of minors.

Physicians in private practice treat approximately 80% of the syphilis and gonorrhea that comes to diagnosis but report to public health departments only one out of every eight cases of syphilis and one out of every nine cases of gonorrhea they treat. Physicians should assist public health departments by reporting the venereal disease cases they treat. Medical societies are urged to cooperate and give broad support to public health authorities. Much effort must still be made by health departments and medical societies to foster mutual trust so that public and private medicine can work effectively for the control of both syphilis and gonorrhea. Most state and some local health departments have venereal disease interviewer-investigators who can work confidentially with the patient and his contacts to determine the source and spread of his infection. The Council urges the physician to utilize the services of these trained investigators.

Adequate therapy of venereal disease, using the right forms and dosages of antibiotics, is essential. *Neisseria gonococci* has shown the ability to develop resistance to penicillin to the point where the recommended dosage now is 4.8 million units of Aqueous procaine penicillin for the treatment of gonorrhea in both males and females. It is anticipated that additional changes in treatment may have to be made from time to time as increasing resistance becomes a problem or more effective antibiotics are discovered. For this reason the Council urges that medical societies impress upon their members the need for keeping abreast of changes in the recommended therapy of the venereal diseases.

The Council encourages the publication of more articles in professional journals on venereal disease and its control for the guidance of the profession. Medical societies are asked to support education of the public through more extensive and imaginative use of all available media and through school curriculum.

The Council urges medical societies to acquaint their membership with the growing and alarming dimensions of the venereal disease problem. Physicians should take all appropriate measures to reverse the rise in venereal disease and bring it under control.

**MESSAGE CENTER**

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**Actions.** Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 µg/ml.) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

**Indications.** For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

**Warnings.** *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

**Precautions.** Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

**Adverse Reactions.** The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

**Dosage and Administration.** *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day; and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices. Because of limited data on repeated doses, no recommendations can be made.

**How Supplied.** Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles.

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(pyrantel pamoate) ORAL SUSPENSION

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Non-staining to teeth  
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(pyrantel pamoate)

equivalent to 50 mg. pyrantel/ml.

ORAL SUSPENSION

While Antiminth is highly effective against pinworms and roundworms, the illustration is not meant to imply 100% efficacy.  
\*Data on file at Roerig. Please see prescribing information on facing page.

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# Continuing Educational Opportunities

From The

KMA Postgraduate Medical Education Office

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## IN KENTUCKY

### SEPTEMBER

- 13-14 Seminar, "Sex Education in Our Community," sponsored by Greater Louisville Organization for Health and Louisville Area Family Planning Council, Health Sciences Center Auditorium, Louisville
- 18-20 KMA ANNUAL MEETING. Ramada Inn/Bluegrass Convention Center, Louisville
- 21-22 Postgraduate seminar\*, "Nephrology for the Practicing Physician," University of Kentucky Medical Center, Lexington. Registration fee: \$40. Seven hours of AAFP credit.
- 26-27 Seminar\*\*, "Clinical Aspects of Pain," Department of Anesthesiology, University of Louisville School of Medicine, Advance Registration Requested (\$25 for physicians); Health Sciences Center Auditorium, Louisville

### OCTOBER

- 1-3 Scientific program\*, "Changing Concepts and Methods in the Practice of Cardiology," University of Kentucky Medical Center, Lexington, sponsored by U.K. College of Medicine and Indiana University School of Medicine. Registration fee: \$100 (for members of the American College of Cardiology) \$125 (for non-members).
- 7-13 Family Medicine Review Program\*, University of Kentucky Medical Center, Lexington. Registration fee: \$185. AAFP credit has been requested for 54 hours.

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\*For further information contact: Ronald D. Hamilton, M.D., Director, Continuing Education, College of Medicine, University of Kentucky, Lexington, Kentucky 40506.

\*\*For further information contact: Gerald D. Swin, Assistant Director, Office of Continuing Education, University of Louisville School of Medicine, Louisville, Kentucky 40201.

## NOVEMBER

- 7 Ninth Annual Louisville Pediatric Lecture, by Melvin Grumbach, M.D., University of Louisville School of Medicine, Health Sciences Center Auditorium, Louisville
- 8-9 Newborn Symposium, "Congenital Defects — Management and Outcome", Department of Pediatrics, University of Louisville School of Medicine, Health Sciences Center Auditorium, Louisville
- 10-11 Scientific Seminar, Kentucky Academy of Family Physicians, Jenny Wiley State Park, Prestonsburg

## IN SURROUNDING STATES

### OCTOBER

- 1-2 Tennessee Valley Medical Assembly, Read House, Chattanooga
- 10-11 Postgraduate course, "Everything You Always Wanted To Know About Dermatology," Cleveland Clinic Foundation, Cleveland
- 19-20 Postgraduate course, "Current Status in Artificial Organs," Cleveland Clinic Foundation, Cleveland
- 19-20 Colloquium, "The Range of Normal in Human Behavior," Shriners Burn Institute Auditorium, University of Cincinnati Medical Center, Cincinnati
- 21-25 Annual Scientific Assembly, American College of Chest Physicians, Four Seasons Hotel, Toronto, Ontario, Canada

### NOVEMBER

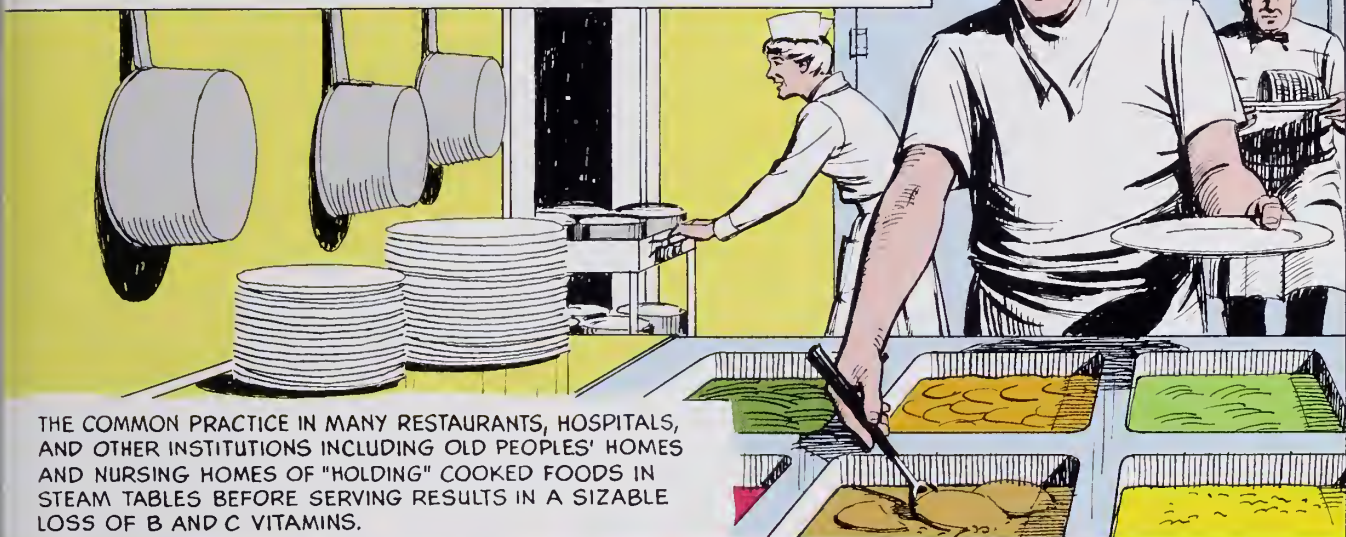
- 14-17 Seminar on "Life-Saving Measures for the Critically Injured," sponsored by the American College of Surgeons and the University of Tennessee College of Medicine, Shriber Auditorium, Memphis

### DECEMBER

- 1-5 Clinical Convention, American Medical Association, Anaheim, California



# The **ALLBEE® with C** SCRAPBOOK of Vitamin Facts & Fallacies



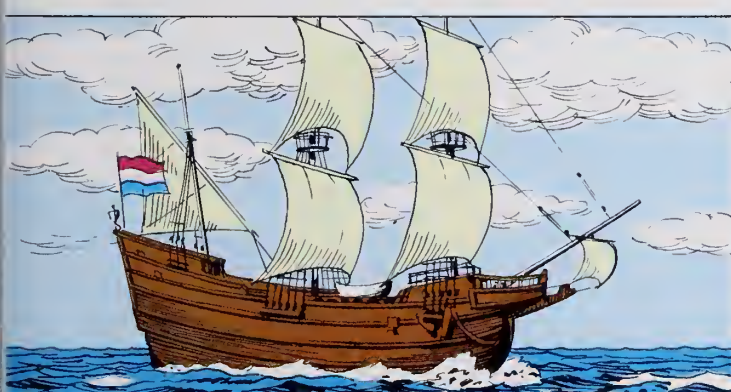
THE COMMON PRACTICE IN MANY RESTAURANTS, HOSPITALS, AND OTHER INSTITUTIONS INCLUDING OLD PEOPLES' HOMES AND NURSING HOMES OF "HOLDING" COOKED FOODS IN STEAM TABLES BEFORE SERVING RESULTS IN A SIZEABLE LOSS OF B AND C VITAMINS.



DURING THE CIVIL WAR 30,714 CASES OF SCURVY WERE REPORTED, AND 383 DEATHS WERE ATTRIBUTED DIRECTLY TO THE DISEASE.



THE AMOUNT OF SUNLIGHT AVAILABLE DURING RIPENING DETERMINES TO A LARGE EXTENT THE FINAL ASCORBIC ACID CONTENT OF TOMATOES. HENCE, A COOL, WET SUMMER PRODUCES WATERY, LESS TASTY FRUIT THAT'S LOWER IN VITAMIN C.



RONSSSENS, A DUTCH PHYSICIAN, WROTE IN 1564 THAT "DUTCH SAILORS WHO, RETURNING FROM SPAIN, WERE ATTRACTED BY THE NOVEL RICHNESS OF THE FRUIT (ORANGES) AND BY THEIR GREED AND GLUTTONY, UNEXPECTEDLY DROVE OUT THE DISEASE (SCURVY), AND HAD THIS HAPPY EXPERIENCE NOT ON A SINGLE OCCASION ONLY, BUT REPEATEDLY."

Available on your  
prescription or  
recommendation  
**ALLBEE® with C**  
High Potency  
B-Complex and  
Vitamin C  
Formula







# Spasm reactor?

# Donnatal!

	each tablet, capsule or 5 cc. teaspoonful of elixir (23% alcohol)	each Donnatal No. 2	each Extentab
hyoscyamine sulfate	0.1037 mg.	0.1037 mg.	0.3111 mg.
atropine sulfate	0.0194 mg.	0.0194 mg.	0.0582 mg.
hyoscine hydrobromide	0.0065 mg.	0.0065 mg.	0.0195 mg.
phenobarbital	( $\frac{1}{4}$ gr.) 16.2 mg	( $\frac{1}{2}$ gr.) 32.4 mg	( $\frac{3}{4}$ gr.) 48.6 mg
(warning: may be habit forming)			

**Brief summary.** Adverse Reactions: Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Contraindications: Glaucoma; renal or hepatic disease; obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy), or hypersensitivity to any of the ingredients.

**A·H·ROBINS** A·H·Robins Company, Richmond, Virginia 23220



# Just what do you get for your AMA dues?

You get a package of personal and professional services and benefits you've probably never been fully aware of.

You get insurance programs at a cost considerably lower than those purchased on an individual basis. A \$250,000 Excess Major Medical Policy. Group Life. Disability Income Insurance. Professional Liability Insurance (in co-sponsorship with your state society.) Then there's the AMA Members Retirement Fund.

You get a comprehensive medical library to help you do your research. An editing service for your articles. Information and reports on

medical and health subjects from any AMA department.

You get publications to keep you abreast of medical and health developments. *JAMA*. *American Medical News*. And *Prism*, the new socioeconomic journal.

You get the Physician's Placement Service to help you find a place to practice or locate an associate. And if you're a resident winding up your training, there's a special workshop to help prepare you for setting up your practice.

All these are just a few of a broad spectrum of benefits and services you get for your dues. But even more important, you get a strong and effective national spokesman to represent you, your interests and your views.

**Join us.**

**We can do much more together.**

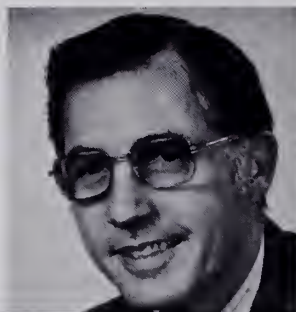
American Medical Association  
535 N. Dearborn St./Chicago, Ill. 60610



## "Prescription drugs – who should determine the maker?"

### Dispenser of Medicine

Clifton J. Latiolais  
President  
American  
Pharmaceutical  
Association



### Maker of Medicine

C. Joseph Stetler  
President  
Pharmaceutical  
Manufacturers  
Association



"Too many doctors are indifferent to the economic consequences of their decisions." So stated a recent issue of *Medical News Report* (December 4, 1972), an independent weekly newsletter published by former AMA Chief Executive F. J. L. Blasingame, M.D.

#### Doctor, are you indifferent...?

In discussing an anticipated increase in Blue Shield rates, Dr. Blasingame's newsletter had this to say:

"In general, it can be said, MDs have given the impression they are not particularly concerned with the increase in cost of health care to their patients..."

"True, an MD's training is primarily scientific, but in the real world of practice, all of his scientific decisions have a price tag, or an economic impact. The economics of health care beckon the practitioner's attention. Concern for economics of medicine is

When the pharmacist recommends that a drug product other than the one ordered be dispensed, the prescriber invariably permits the change when he feels the best interests of the patient will be served.

#### Shortcomings of Pro-Substitution Argument

The fact remains that it is necessary for the prescriber to know that the change is being contemplated, and to be in a position to consent or demur. Without that opportunity, the unilateral decision of the pharmacist made in the absence of clinical knowledge of the patient, could expose him to needless risks, and in addition, jeopardize the relationship between the professions of Pharmacy and Medicine. In my view, there is nothing in the pro-substitution argument that offsets these risks.

#### The Issue of Drug Knowledge

Substitution advocates claim that the primary justification for changing the rules is the desire to better utilize pharmacists' knowledge about drugs. Yet the pharmacist's task to keep current on the entire field of drug therapy, to some degree puts him at a disadvantage. Most often, a practicing physician will need expert knowledge of no more than 2



ould be an obligation of medical practice...

"Medical societies ought to conduct continuing campaigns to point out the substantial savings that could be realized thru deductible insurance and protection for catastrophic illness. At the very least, they should, in the patients' interest, question the practices of any insurance organization that raises health care costs by forcing policyholders to buy insurance they may not need or want and probably won't ever use.

"Too many doctors are indifferent to the economic consequences of their decisions. Too many, for example, habitually hospitalize patients for the convenience of the MD. It's nonsense to deny such habits exist...

"Doctors, thru their medical societies, have unhesitatingly appealed to their patients for support in the fight against government interference with the private practice of medicine. And the public in the past has responded. It's time the American Medical Association and state and local medical societies paid off the debt by decisive action to hold down the cost of medical care."

### Cost of Drugs

Insurance rates and hospital charges are only two factors in health

care costs. The cost of drugs—both prescription and nonprescription—is another.

And when it comes to drug costs, the nation's pharmacists are concerned. Through their national professional society, the American Pharmaceutical Association, pharmacists are advising the public to use nonprescription medication cautiously and conservatively, and to seek the advice of their pharmacist before selecting or purchasing such drugs.

### Outdated Laws

The pharmacist also is aware that when it comes to prescription drugs, often he has an even greater opportunity to reduce the cost to the patient—with no sacrifice in the quality of the medication dispensed. But in many states, outdated and antiquated laws prevent the pharmacist from engaging in drug product selection. "Drug product selection" simply means that the pharmacist functions in the patient's interest by consciously choosing, from the multiple brands available, a low-cost quality brand of the specific drug to be dispensed in response to the physician's prescription order.

Much *misinformation* has been purposely spread by those who stand to gain financially by maintaining

high drug costs to the public. An endless stream of propaganda has emanated from the drug industry in an effort to persuade the medical profession that these so-called anti-substitution laws should be retained. And as long as these laws are retained, the drug industry will continue its current marketing practices which contribute unnecessarily to high drug costs to patients. These practices also are inviting government agencies to expand their restrictive controls on physicians and pharmacists.

### APhA Efforts

As pharmacists, we are concerned about health care costs. We hope that every physician shares our concern on this vital issue, and will give his personal support to the constructive efforts APhA has undertaken in the interest of all patients.

*(For a complete discussion of drug product selection, you are invited to request a free copy of the "White Paper on the Pharmacist's Role in Product Selection" from: American Pharmaceutical Association, 2215 Constitution Avenue, N.W., Washington, D.C. 20037.)*

or 30 drugs that he selects to treat the majority of conditions encountered in his practice. Moreover, the physician's choice of a specific brand is based on his knowledge of the patient's medical history and current condition, and his experiences with the particular manufacturer's product.

Some substitution proponents have argued that the dispensing of a prescription is a simple two-party transaction between the pharmacist and the patient, and that a substituting pharmacist may avoid even a technical breach of contract by simply notifying the patient that he is making the substitution. I would judge that few courts would be sympathetic toward a pharmacist who substituted without physician approval and who undertook a legal defense that seeks to make the patient responsible for the pharmacist's actions.

### Reduced Prescription Prices?

Substitution advocates are suggesting to the consumer, and particularly the consumer activist, that reduced prescription prices could follow legalization of substitution. We have seen absolutely no evidence to justify this claim. To the contrary, experience in Alberta, Canada, where substitution is authorized, suggests

the opposite.

Many pharmacists understandably are concerned about the cost of maintaining multiple stocks of similar products. While there is no doubt that inventory costs rise when additional brands are stocked, it would be interesting to know how much they rise, and how many pharmacists actually stock *all* brands—of, say, ampicillin or tetracycline—or how long they keep "slow moving" products on their shelves before they are returned for credit. To ask that the industry eliminate multiple sources is to ask competitors to stop competing.

### Drug Substitution—A License for the Unethical

Anti-substitution repeal would favor "corner cutting" pharmacists and manufacturers. For them, free substitution would be not a right, but a license. As an aftermath, it is quite likely that the confidence of both physicians and patients in the profession of Pharmacy would be eroded, as revelations about the unconscionable behavior of an undisciplined few were magnified in the press or in professional circles.

### Summary

In short, what the American Pharmaceutical Association advo-

cates as a broad-spectrum panacea looks to us to be not only a minority view (advocacy of substitution is by no means a uniform policy in Pharmacy), but also an extraordinarily costly and ineffective remedy, whose side effects are odious. We believe (1) that an impressive majority of pharmacists prefer to work with Medicine and with industry, for the consumer, and for the general good, (2) that they seek the privilege to substitute when the patient might gain and when the patient's doctor agrees, and (3) that they seek to work for the resolution of genuine grievances openly and professionally.

*(For amplification of PMA views, please write for our booklet, "The Medications Physicians Prescribe: Who Shall Determine the Source?" It is available from: Pharmaceutical Manufacturers Association, 1155 Fifteenth Street, N.W., Washington, D.C. 20005.)*

Pharmaceutical  
Manufacturers Association  
1155 Fifteenth Street, N.W.  
Washington, D.C. 20005



# Synthroid<sup>®</sup>

(sodium levothyroxine)

## the smooth road to thyroid replacement therapy.

*Synthroid* is T<sub>4</sub>.  
It provides your patients with  
what is needed for complete  
thyroid replacement therapy.



Free Tab-Minder sample  
packages available  
from Flint Professional  
Services Department.

**Indications:** SYNTHROID (sodium levothyroxine) is specific replacement therapy for diminished or absent thyroid function resulting from primary or secondary atrophy of the gland, congenital defect, surgery, excessive radiation, or antithyroid drugs. Indications for SYNTHROID (sodium levothyroxine) **Tablets** include myxedema, hypothyroidism without myxedema, hypothyroidism in pregnancy, pediatric and geriatric hypothyroidism, hypopituitary hypothyroidism, simple (nontoxic) goiter, and reproductive disorders associated with hypothyroidism. SYNTHROID (sodium levothyroxine) **for Injection** is indicated for intravenous use in myxedematous coma and other thyroid dysfunctions where rapid replacement of the hormone is required. The injection is also indicated for intramuscular use in cases where the oral route is suspect or contraindicated due to existing conditions or to absorption defects, and when a rapid onset of effect is not desired.

**Precautions:** As with other thyroid preparations, an overdosage of SYNTHROID (sodium levothyroxine) may cause diarrhea or cramps, nervousness, tremors, tachycardia, vomiting and continued weight loss. These effects may begin after four or five days or may not become apparent for one to three weeks. Patients receiving the drug should be observed closely for signs of thyrotoxicosis. If indications of overdosage appear, discontinue medication for 2-5 days, then resume at a lower dosage level. In patients with diabetes mellitus, careful observations should be made for changes in insulin or other antidiabetic drug dosage requirements. If hypothyroidism is accompanied by adrenal insufficiency, such as Addison's Disease (chronic adrenocortical insufficiency), Simmonds's Disease (panhypopituitarism) or Cushing's syndrome (hyperadrenalism), these dysfunctions must be corrected prior to and during SYNTHROID (sodium levothyroxine) administration. The drug

should be administered with caution to patients with cardiovascular disease; development of chest pains or other aggravations of cardiovascular disease requires a reduction in dosage.

**Contraindications:** Thyrotoxicosis, acute myocardial infarction. **Side effects:** The effects of SYNTHROID (sodium levothyroxine) therapy are usually in being manifested. Side effects, when they occur, are secondary to increased rates of basal metabolism; sweating, heart palpitations with or without pain, leg cramps, and weight loss. Diarrhea, vomiting, and nervousness have also been observed. Myxedematous patients with heart disease have died from abrupt increase in dosage of thyroid drugs. Careful observation of the patient during the beginning of any thyroid therapy will alert the physician to any untoward effects.



It has been shown that *Synthroid* (T<sub>4</sub>) converts to T<sub>3</sub> at the cellular level to supply metabolic needs.<sup>1, 2</sup>

**1** *Synthroid* is T<sub>4</sub>.

**2** Because T<sub>4</sub> converts to T<sub>3</sub> at the cellular level, it provides full thyroid replacement at maintenance doses.<sup>1, 2</sup>

**3** T<sub>4</sub> hormone content is controlled by chemical assay.

**4** *Synthroid* is assayed chemically; no biologic test is necessary to measure potency.

**5** *Synthroid* provides predictable results when used with current thyroid function tests.

**6** *Synthroid* is the most prescribed brand name of thyroid in the U.S. and Canada.

**7** Sodium levothyroxine in *Synthroid* tablets is chemically pure. It does not contain any animal gland parts.

**8** When stored properly, *Synthroid* has a longer shelf life than desiccated thyroids.

**9** On a daily basis, *Synthroid* is cost competitive with other thyroid products.

The smooth road to  
thyroid replacement therapy.

**Synthroid**<sup>®</sup>  
(sodium levothyroxine)

most cases with side effects, a reduction of dose followed by a more gradual adjustment upward will result in a more accurate indication of the patient's dosage requirements without the appearance of side effects.

**Dosage and Administration:** The activity of 0.1 mg. SYNTHROID (sodium levothyroxine) is equivalent to approximately one grain of desiccated thyroid, U.S.P. Administer SYNTHROID tablets as a single daily dose. In hypothyroidism without myxedema, the usual initial adult dose is 0.1 mg. daily, and may be increased by 0.1 mg. every 30 days until proper metabolic balance is attained. Clinical evaluation should be made monthly and PBI measurements about every 90 days. Final maintenance dosage will usually range from 0.2-0.4 mg. daily. In adult myxedema, the initial dose should be 0.025 mg. daily. The

dose may be increased to 0.05 mg. after two weeks and to 0.1 mg. at the end of a second two weeks. The daily dose may be further increased at two-month intervals by 0.1 mg. until the optimum maintenance dose is reached (0.1-1.0 mg. daily).

**Supplied:** Tablets: 0.025 mg., 0.05 mg., 0.1 mg., 0.15 mg., 0.2 mg., 0.3 mg., 0.5 mg., scored and color-coded, in bottles of 100, 500, and 1000. Injection: 500 mcg. lyophilized active ingredient and 10 mg. of Mannitol, U.S.P., in 10 ml. single-dose vial, with 5 ml. vial of Sodium Chloride Injection, U.S.P., as a diluent. SYNTHROID (sodium levothyroxine) for Injection may be administered intravenously utilizing 200-400 mcg. of a solution containing 100 mcg. per ml. If significant improvement is not shown the following day, a repeat injection of 100-200 mcg. may be given.

1. Braverman, L. E., Ingbar, S. H., and Sterling, K.: Conversion of Thyroxine (T<sub>4</sub>) to Triiodothyronine (T<sub>3</sub>) in Athyreotic Human Subjects, J. Clin. Invest. 49:855-64, 1970.

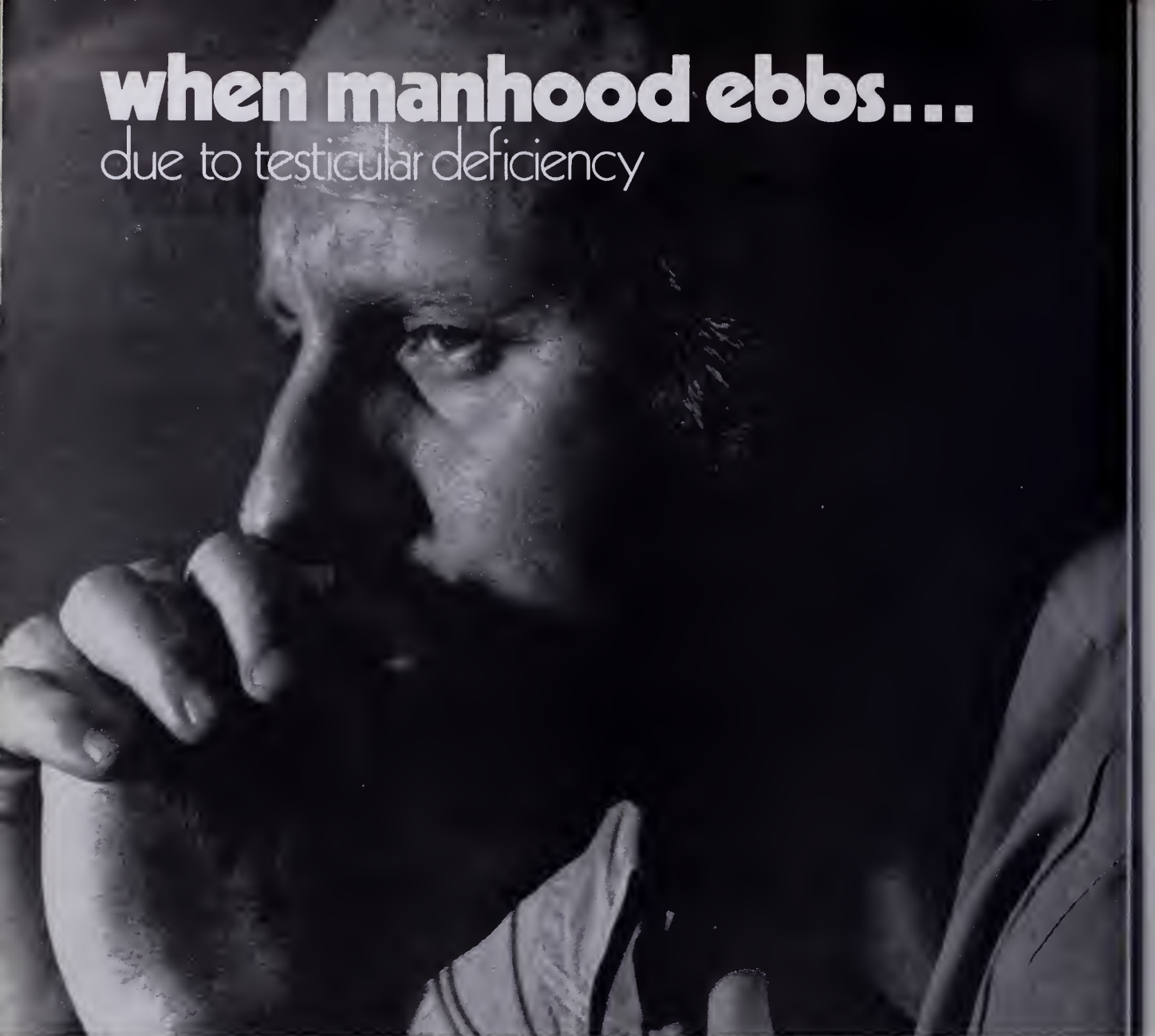
2. Surks, M. I., Schadow, A. R., and Oppenheimer, J. H.: A New Radioimmunoassay for Plasma L-Triiodothyronine: Measurements in Thyroid Disease and in Patients Maintained on Hormonal Replacement. J. Clin. Invest. 51:3104-13, 1972.



**FLINT LABORATORIES**

DIVISION OF TRAVENOL LABORATORIES, INC.

Deerfield, Illinois 60015



# when manhood ebbs...

due to testicular deficiency

## Halotestin® 5 mg tablets

fluoxymesterone, Upjohn oral hormone replacement

*"When impotence is the principal complaint of a patient, it is usually the result of an emotional disturbance, in which case androgen therapy is valueless and at times may add to the psychic trauma."\**

**Halotestin® Tablets—2, 5 and 10 mg**  
(fluoxymesterone Tablets, U.S.P., Upjohn)

**Indications in the male:** Primary indication in the male is replacement therapy. Prevents the development of atrophic changes in the accessory male sex organs following castration: 1. Primary eunuchoidism and eunuchism. 2. Male climacteric symptoms when these are secondary to androgen deficiency. 3. Those symptoms of panhypopituitarism related to hypogonadism. 4. Impotence due to androgen deficiency. 5. Delayed puberty, provided it has been definitely established as such, and it is not just a familial trait.

**In the female:** 1. Prevention of postpartum breast manifestations of pain and engorgement. 2. Palliation of androgen-responsive

advanced, inoperable female breast cancer in women who are more than 1, but less than 5 years post-menopausal or who have been proven to have a hormone-dependent tumor, as shown by previous beneficial response to castration.

**Contraindications:** Carcinoma of the male breast. Carcinoma, known or suspected, of the prostate. Cardiac, hepatic or renal decompensation. Hypercalcemia. Liver function impairment. Prepubertal males. Pregnancy.

**Warnings:** Hypercalcemia may occur in immobilized patients, and in patients with breast cancer. In patients with cancer this may indicate progression of bony metastasis. If this occurs the drug should be discontinued. Watch female patients closely for signs of virilization. Some effects may not be reversible. Discontinue if cholestatic hepatitis with jaundice appears or liver tests become abnormal.

**Precautions:** Patients with cardiac, renal or hepatic derangement may retain sodium and water thus forming edema. Priapism or excessive sexual stimulation, oligospermia, reduced

ejaculatory volume, hypersensitivity and gynecomastia may occur. When any of these effects appear the androgen should be stopped.

**Adverse Reactions:** Acne. Decreased ejaculatory volume. Gynecomastia. Edema. Hypersensitivity, including skin manifestations and anaphylactoid reactions. Priapism. Hypercalcemia (especially in immobile patients and those with metastatic breast carcinoma). Virilization in females. Cholestatic jaundice.

**How Supplied:**

**2 mg**—bottles of 100 scored tablets.

**5 mg**—bottles of 50 scored tablets.

**10 mg**—bottles of 50 scored tablets.

For additional product information, see your Upjohn representative or consult the package circular.

J-3262 4 MED B-6-S (MA)

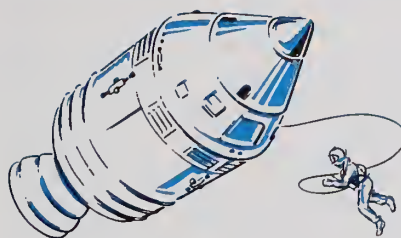
\*Cecil-Laeb. Textbook of Medicine, Vol. II, ed. 1 Beeson, P. B. and McDermatt, W. eds. Philadelphia W. B. Saunders Co., 1971, p. 1816.

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**Upjohn**

The Upjohn Company, Kalamazoo, Mich. 49001





Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . o prophylaxis to prevent kidney or bladder calculi.

# Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, 300 mg.; SODIUM ACID PHOSPHATE, 500 mg.

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages

complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

## Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.



WILLIAM P. POYNTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

*Manufacturers of Ethical Pharmaceuticals*

# IN ASTHMA IN EMPHYSEMA



*optional  
therapy*



## **THE** mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE** tablets contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. Dosage is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2** tablets contain 195 mg. potassium iodide; 130 mg. aminophylline. Dosage is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications** are listed above. **MUDRANE GG** tablets contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. Dosage is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2** tablets contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. Dosage is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. Dosage: Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with  $\frac{1}{2}$  to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

### **MUDRANE—original formula**

*First choice*

### **MUDRANE-2**

*When ephedrine is too exciting  
or is contraindicated*

### **MUDRANE GG**

*During pregnancy or when K.I. is  
contraindicated or not tolerated*

### **MUDRANE GG-2**

*A counterpart for Mudrane-2*

### **MUDRANE GG ELIXIR**

*For pediatric use  
or where liquids are preferred*

*Clinical specimens  
available to physicians.*

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

*Manufacturers of Ethical Pharmaceuticals*





# Integument!

Our skin—the human integument—covers us, defines us, protects us. But skin is subject to cuts, burns, abrasions. And infections. Neosporin Ointment fights infection by providing broad antibacterial action against susceptible skin invaders. It contains antibiotics that are rarely used systemically, reducing the risk of sensitization.



**INDICATIONS:** *Therapeutically*, used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

*Prophylactically*, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

**CONTRAINDICATIONS:** Not for use in the external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

**PRECAUTION:** As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Complete literature available on request from Professional Services Dept. PML.

## NEOSPORIN<sup>®</sup> Ointment

(POLYMYXIN B-BACITRACIN-NEOMYCIN)

Each gram contains: Aerosporin<sup>®</sup> brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg. (equivalent to 3.5 mg. neomycin base); special white petrolatum q.s. In tubes of 1 oz. and ½ oz. and ¼ oz. (approx.) foil packets.



Wellcome

Burroughs Wellcome Co.  
Research Triangle Park  
North Carolina 27709

reached in 2 to 3 hours and can be maintained on the recommended 4 to 8 Gm/day dosage schedule that's convenient for almost all patients.

#### Generally good tolerance

Gantrisin (sulfisoxazole) Roche causes relatively few undesirable reactions, and serious toxic reactions are rare. Minor reactions are comparatively infrequent, but may include nausea, headache and vomiting. Gantrisin may usually be given safely, even for prolonged periods, in the treatment of chronic or recurrent nonobstructed cystitis, pyelitis or pyelonephritis due to *E. coli* and other susceptible organisms.

(See Important Note in summary of product information.)

Complete blood counts and urinalyses, with microscopic examination, should be performed frequently.

#### High solubility

Gantrisin is one of the most soluble of all sulfonamides, with both free and acetylated forms highly soluble in the commonly encountered urinary pH range of 5.5 to 6.5. Urine levels have been detected in 60 minutes; therapeutic levels are usually reached in 2 to 3 hours. About 90% of a single dose is excreted in 24 to 48 hours. As with all sulfonamides, adequate fluid intake must be maintained.

#### Economy

Average cost of therapy is still only about 6½¢ per tablet.

**References:** 1. Bran, J. L.; Karl, D. M., and Kaye, D.: *Clin. Pharmacol. Ther.*, 12:525, 1971. 2. Burke, E. C., and Stickler, G. B.: *Mayo Clin. Proc.*, 44: 318, 1969. 3. Hibbard, L. T., in Bulger, M. J., et al.: *Patient Care*, 1:(3)47, 1967. 4. Holloway, W. J.; Furlong, J. H., and Scott, E. G.: *J. Urol.*, 102:249, 1969. 5. House, T. E., et al.: *Obstet. Gynecol.*, 34:670, 1969. 6. Lampe, W. T.: *J. Am. Geriatr. Soc.*, 16:798, 1968. 7. Möffat, N. A., and Wenzel, J. J.: *Curr. Ther. Res.*, 13:286, 1971. 8. Normand, I. C. S.: *Practitioner*, 204:91, 1970. 9. Pryles, C. V.: *Med. Clin. North Am.*, 54:1077, 1970. 10. Seneca, H.; Peer, P., and Warren, B.: *J. Urol.*, 99:337, 1968. 11. Trafton, H. M., and Lind, H. E.: *J. Urol.*, 101:392, 1969.

## if she drops out of her therapy too soon?

For acute, chronic or recurrent nonobstructed cystitis, pyelitis, or pyelonephritis due to susceptible organisms

begin with  
**Gantrisin®**  
sulfisoxazole/Roche® 

**Usual adult dosage:** 4 to 8 tablets *stat*, 2 to 4 tablets *q.i.d.*

**Adverse Reactions:** *Blood dyscrasias:* Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia; *Allergic reactions:* Erythema multiforme (Stevens-Johnson syndrome), generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis; *Gastrointestinal reactions:*

Nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis; *C.N.S. reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia; *Miscellaneous reactions:* Drug fever, chills and toxic nephrosis with oliguria and anuria. Periarteritis nodosa and L.E. phenomenon have occurred. Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have

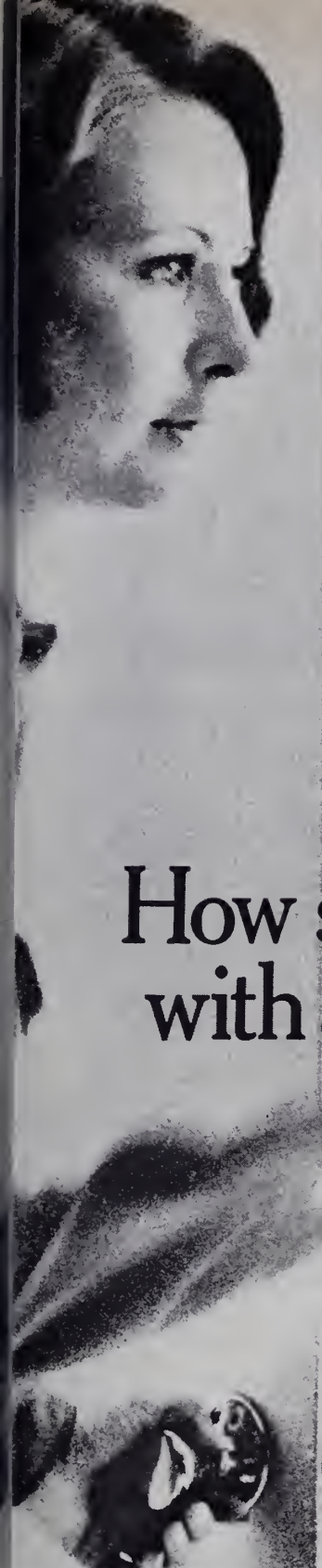
caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

**Supplied:** Tablets containing 0.5 Gm sulfisoxazole.



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Nutley, N.J. 07110





Success in preventing recurrence of urinary tract infection usually depends on success in treating the initial infection. And that in turn is closely linked to factors of proper drug, proper dosage, and *proper length of therapy*. Much of the effectiveness of an antibacterial agent used to treat an acute nonobstructed urinary tract infection depends, in fact, upon proper length of therapy. As you know, it is potentially hazardous for a patient to discontinue her medication too soon; on the other hand, overtreatment has no advantage and may even cause adverse reactions.

#### **Total therapy: 14 days**

Some recent studies suggest that therapy in acute nonobstructed urinary tract infections should be continued for 10 to 14 days even

if patients become asymptomatic in 2 or 3 days, as they often do.<sup>1-11</sup> After inadequate treatment, of course, survival of bacteria can cause a quick recurrence of infection.

The problem of persuading a patient to complete the full course of therapy remains difficult. Perhaps agreeing on the date for a follow-up examination at the end of medication may be the most effective way of convincing a less than enthusiastic patient to continue therapy even after she becomes asymptomatic.

As a urinary antibacterial, Gantrisin (sulfisoxazole) Roche offers your patient important advantages, some of which may help increase patient cooperation.

#### **High urinary and plasma levels**

Therapeutic urinary and plasma concentrations are usually

## How soon will she drop in with a recurrent cystitis...

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Nonobstructed urinary tract infections (mainly cystitis, pyelitis, pyelonephritis) due to susceptible organisms.

**IMPORTANT NOTE:** *In vitro* sensitivity tests not always reliable; must be coordinated with bacteriological and clinical response. Add aminobenzoic acid to follow-up culture media. Increasing frequency of resistant organisms limits usefulness of antibacterial agents, especially in chronic and recurrent urinary infec-

tions. Maximum safe total sulfonamide blood level, 20 mg/100 ml; measure levels as variations may occur.

**Contraindications:** Hypersensitivity to sulfonamides; infants less than 2 months of age; pregnancy at term and during the nursing period.

**Warnings:** Safety in pregnancy not established. Do not use for Group A beta-hemolytic streptococcal infections, as sequelae (rheumatic fever, glomerulonephritis) are not prevented. Deaths reported from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dys-

crasias. Sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. CBC and urinalysis with careful microscopic examination should be performed frequently.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, severe allergy or bronchial asthma. Hemolysis, frequently dose-related, may occur in glucose-6-phosphate dehydrogenase-deficient patients. Maintain adequate fluid intake to prevent crystalluria and stone formation.

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# How strong must a tranquilizer be for severe anxiety?

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The achievement of desired therapeutic results is often a function of the dosage strength as well as the drug's intrinsic action. Thus, when anxiety is severe, the 25-mg strength of Librium frequently provides the necessary antianxiety action with a minimum of unwanted adverse reactions. Librium 25 mg is a convenient dosage form for the relief of severe, incapacitating anxiety, specifically formulated to supplement your counsel and reassurance.

### Benefits-to-risks ratio permits higher dosage

For over 13 years, Librium has been recognized for its excellent benefits-to-risks ratio, an asset in the *higher* dosage ranges as in more common clinical applications. Thus, the frequency of dosage with Librium 25 mg can be flexibly adjusted to the needs and response of the individual patient, up to 100 mg daily if required. Total daily dosage for the elderly and debilitated should not exceed 20 mg. When severe anxiety has been reduced, Librium dosage should be correspondingly reduced or discontinued entirely.



basic support  
in severe anxiety  
**Librium® 25 mg**  
(chlordiazepoxide HCl)  
1 capsule t.i.d./q.i.d.



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Nutley, N.J. 07110

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Relief of anxiety and tension occurring alone or accompanying various disease states.

**Contraindications:** Patients with known hypersensitivity to the drug.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

**Adverse Reactions:** Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

**Supplied:** Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.





*The Journal of The*  
**KENTUCKY**  
*Medical Association*

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Everybody experiences psychic tension.



Most people can handle this tension.



Some people develop excessive psychic tension and need your counseling,



and a few may need counseling  
*and* the psychotropic action of Valium® (diazepam).



Before deciding to make Valium (diazepam) part of your treatment plan, check on whether or not the patient is presently taking drugs and, if so, what his response has been. Along with the medical and social history, this information can help you determine initial dosage, the possibility of side effects and the ultimate prospects of success or failure.

While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

**Dosage:** Individualize for maximum beneficial effect.

**Adults:** Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

**Supplied:** Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose® packages of 1000.



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**Contraindications:** Porphyria, sensitivity to barbiturates, or susceptibility to dependence on sedative-hypnotics. **Warning:** May be habit forming. **Precautions:** Exercise caution in: moderate to severe hepatic disease, withdrawal in drug dependence or the taking of excessive doses over a long period, to avoid withdrawal symptoms; elderly or debilitated patients, to avoid possible marked excitement or depression; use with alcohol or other CNS depressants because of combined effects. **Adverse Reactions:** Drowsiness at daytime sedative dose levels, skin rashes, "hangover" and gastrointestinal disturbances are seldom seen. **Usual Adult Dosage:** For daytime sedation, 15 mg. to 30 mg. t.i.d. or q.i.d. For hypnosis, 50 mg. to 100 mg. **Available as:** Tablets, 15 mg., 30 mg., 50 mg., 100 mg.; Elixir, 30 mg. per 5 cc. (alcohol 7%). BUTICAPS® [Capsules BUTISOL SODIUM (sodium butabarbital)] 15 mg., 30 mg., 50 mg., 100 mg.

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# MESSAGE FROM THE PRESIDENT

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**M**any of you who read this *Journal* regularly probably did not realize that the President's Page for this month had to be submitted by September 10. This is the schedule upon which our *Journal* must operate if it is to be the efficient publication we have grown to expect.

With this publication deadline, obviously the deliberations and final actions of the House of Delegates are not known and, consequently, priorities cannot be established at this time. There are, however, two very positive ideas on my mind as we enter this new Associational year.

First, I sincerely believe we have spent enough time "talking to one another." I feel it is past time for us to take our message to the people of this Commonwealth. Along those lines, I have asked our Public Relations Committee to mount a vigorous and far-reaching program to attempt to tell the KMA story to every civic, service and community group we can possibly speak to in the next 12 months.

Second, I have instructed the staff at KMA to make available to the officers, trustees and committee chairmen the most up-to-date information available on every issue that is facing us in Kentucky medicine. I fully expect these instructions to be carried out to the letter so that our membership will be as well informed as any state medical association in the country.

More definitive programs will be set forth in the weeks ahead. I appreciate your confidence as I embark on this new challenge. As with every other man who has held this post, I know full well that without the wholehearted cooperation of the officers, trustees and membership of KMA we cannot succeed. Working together there is very little we cannot accomplish. It is within the context of working together that I know we will reach the goals that have been set for this Association.

*Fred C Rainey*

# A Link in the Chain

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*Mrs. William Pearson, Owensboro, was installed as President of the Woman's Auxiliary to the Kentucky Medical Association at the Annual Convention of the Auxiliary, September 17-19. Mrs. Pearson will be writing the "A Link in The Chain" section of The Journal for the Associational year, 1973-74*



**I**naugural literally means "to make a formal beginning of." And this is the day that marks the beginning of YOUR 1973-74 Auxiliary year. The beginning of the continuation of meeting the same ongoing challenges and dedicating ourselves to meeting the new ones. Some of these challenges will appear difficult, but isn't it true that the difficult is that which most often can be done immediately, while the impossible really only takes a little longer? Does that sound optimistic? I AM optimistic . . . about the Auxiliary's future and about medicine's future. However, no farmer ever plowed a field by turning it over in his mind; and no one ever climbed a hill by looking at it. It is not only necessary to have faith in our cause, we must also make an investment in it—MORE OF OURSELVES. We have no shortage of the crop of thoughts and ideas within this organization, but we need a peck of enthusiasm and a bushel of action to harvest that crop.

Inaugural also means "marking the beginning of a new venture." We are venturing into two new areas of concern. We have enlarged the scope of our Committee on Mental Health, and that Committee will this year be focusing on the problem of child abuse. We now have a Committee on Public Relations. Its goal will be to create goodwill—that valuable asset that competition can neither undersell or destroy.

But I have not, and do not, suggest any massive change or reform. Rather, I would suggest that we not shrink from some re-evaluation where it is indicated; that we not be afraid of change if it is necessary for progress. Let's not be caught trying to do today's job with yesterday's concepts. Some of the things we have always held as indispensable to the ongoing of this Auxiliary truly are, but we need to take a long, hard, serious look at others and ask ourselves: Do these things fulfill our role as it was intended? Do they make us a more effective auxiliary force to the medical profession of this State? To better maintain a position as one of Kentucky medicine's most tireless workers and ardent supporters should be and MUST be our goal.

MRS. WILLIAM PEARSON, PRESIDENT  
WOMAN'S AUXILIARY TO KMA



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*From the files of the*

COMMITTEE FOR THE  
**STUDY OF MATERNAL MORTALITY**

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**T**HIS 17-year-old married white, gravida 1, para 0, was seen only once prenatally stating she had recently had some vaginal bleeding. Her hemoglobin was normal. She was next seen when she was admitted to the hospital in early labor at 5:00 p.m., January 5, 1971. Examination revealed a blood pressure of 120/80, fetal heart tones 142, and questionable early labor. At midnight her contractions were irregular. At 3:00 a.m., January 6, her blood pressure was 110/70. At 6:30 p.m. her blood pressure was 160/90 and fetal heart tones were good. Her contractions improved, occurring every 10 minutes. Vaginal examination by her physician at 11:00 a.m. revealed the cervix to be 6-7 cm dilated, and the membranes ruptured. She received 25 mg Demerol IV at 12:40 p.m. She was re-examined by her physician at 4:00 p.m. and her blood pressure was 140/90, fetal heart tones 148. She received 50 mg Demerol at 5:45 p.m. There were no additional nursing notes on the labor record, only the physician's dictated record stating: "the membranes ruptured around 5:30 p.m. spontaneously." Her progress was described as slow. She was completely dilated for 45 minutes and made no progress. Around 10:30 p.m., using gas oxygen anesthesia, the head was rotated with midforceps toward the midline with delivery of an 8 lb 10-1/2 oz male infant in good condition, with midline episiotomy. The placenta was expressed intact and the episiotomy repaired. She had a fairly deep anesthetic and it was noted that when she delivered hemorrhage occurred; the blood didn't clot. The laboratory was notified and after 45 minutes one unit of blood was started. She received 40 mgm of Mephyton following delivery and 500 cc of Dextran before the blood was available.

At 11:00 p.m. she was in shock on the delivery table. She was placed in the Trendelenburg position. Her blood pressure was

96/30 and her hands and feet were described as very cyanotic. At 11:30 p.m. her blood pressure was 40/20. Blood was started at 11:45 p.m. and another 500 cc Dextran was started at 12:05 a.m. On January 7, her blood pressure was 68/30 and the fundus was described as firm when it was massaged. She received 1 ampule of Ergotrate and Pitocin IV at 12:15 and she was described as bleeding excessively; her blood pressure was 62/34 and pulse 180 by abdominal aorta palpation. Another 500 cc whole blood was started in the right arm. However, they were unable to get it to run due to a clot in the tubing. Another unit was started at 12:45 a.m. She received 5.0 gm Fibrinogen, plus oxygen by bag, however she ceased breathing at 1:30 p.m.

There was no autopsy and the cause of death was listed as hemorrhage following term pregnancy.

**Comment**

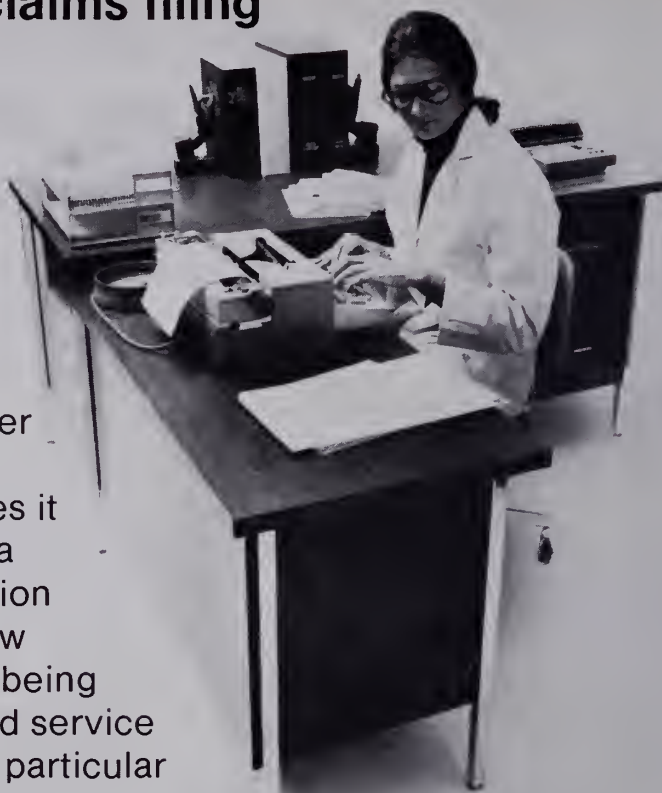
The Committee classified this case as a direct obstetrical death with preventable factors. Inadequate diagnostic procedures were carried out for a tentative diagnosis of ruptured uterus, cervical laceration or extensive vaginal lacerations was entertained by the committee. More aggressive measures at diagnosis should have been undertaken. That is, there is no note made that exploration of the uterus, examination of the cervix and vagina were carried out. If such had been done certainly a cause for the bleeding could have been found and remedied. More complete studies concerning her coagulation problem should have been carried out. The midforceps rotation of a large infant, 8 lb. 10 1/2 oz., seems to indicate that such lacerations of the uterus, cervix, or vagina were the cause of her hemorrhage, although a primary coagulation defect could also have been the etiology.

## Unnecessary claims filing costs you time and money.

Blue Shield of Kentucky provides many levels of surgical-medical benefits to our over a million and a quarter members. With the many coverage codes it is difficult to look at a member's identification card and readily know whether the service being provided is a covered service under the member's particular contract.

To assist in identifying covered services we have provided each physician's office with a Blue Shield Physicians' Manual and we encourage your Medical Assistants use of this manual. The manual serves as a ready reference to determine what services are covered by the member's contract.

Our Professional Relations Representatives are always available to assist you and will be happy to visit your office should you have any questions. Please contact our Blue Cross and Blue Shield Professional Relations Division, 3101 Bardstown Road, Louisville, Kentucky 40205.



**Blue Cross  
Blue Shield  
Delta Dental**  
of Kentucky





# THE CHALLENGE OF PAIN



# FOR THE PHYSICIAN **THE CHALLENGE:**

## **How do you evaluate pain?**

There are as many degrees of pain as there are people who experience it. And the intensity of pain — a question of degree — varies with the individual. Your training, knowledge, experience and skill provide the ability to interpret not only pain, but your patient's tolerance as well. Only you can place pain in its proper perspective.

## **How do you manage pain?**

Minor aches and pains can usually be controlled with mild analgesics. Intense pain may require more potent medication. But for effective analgesia in mild-to-moderate pain, you can depend upon Anexsia-D.





FOR THE PATIENT IN PAIN

# ANEXSIA-D<sup>®</sup>

May eliminate, delay or reduce the need for  
parenteral analgesics.

---

Produces significant relief of mild-to-moderate pain.

---

Anexsia-D has a schedule III classification which  
permits prescription refill up to six months,  
or five times, at your specification.

---

# ANEXSIA-D<sup>®</sup>

Hydrocodone bitartrate 7 mg. (Warning: may be habit forming), Phenacetin 150 mg.,  
Aspirin 230 mg., Caffeine 30 mg.

(Full prescribing information on following page)

**BEECHAM-MASSENGILL PHARMACEUTICALS**

Div. of Beecham Inc.

Bristol, Tennessee 37620

# MEET THE CHALLENGE OF PAIN WITH **ANEXSIA-D**<sup>®</sup> *for significant relief of mild-to-moderate pain*

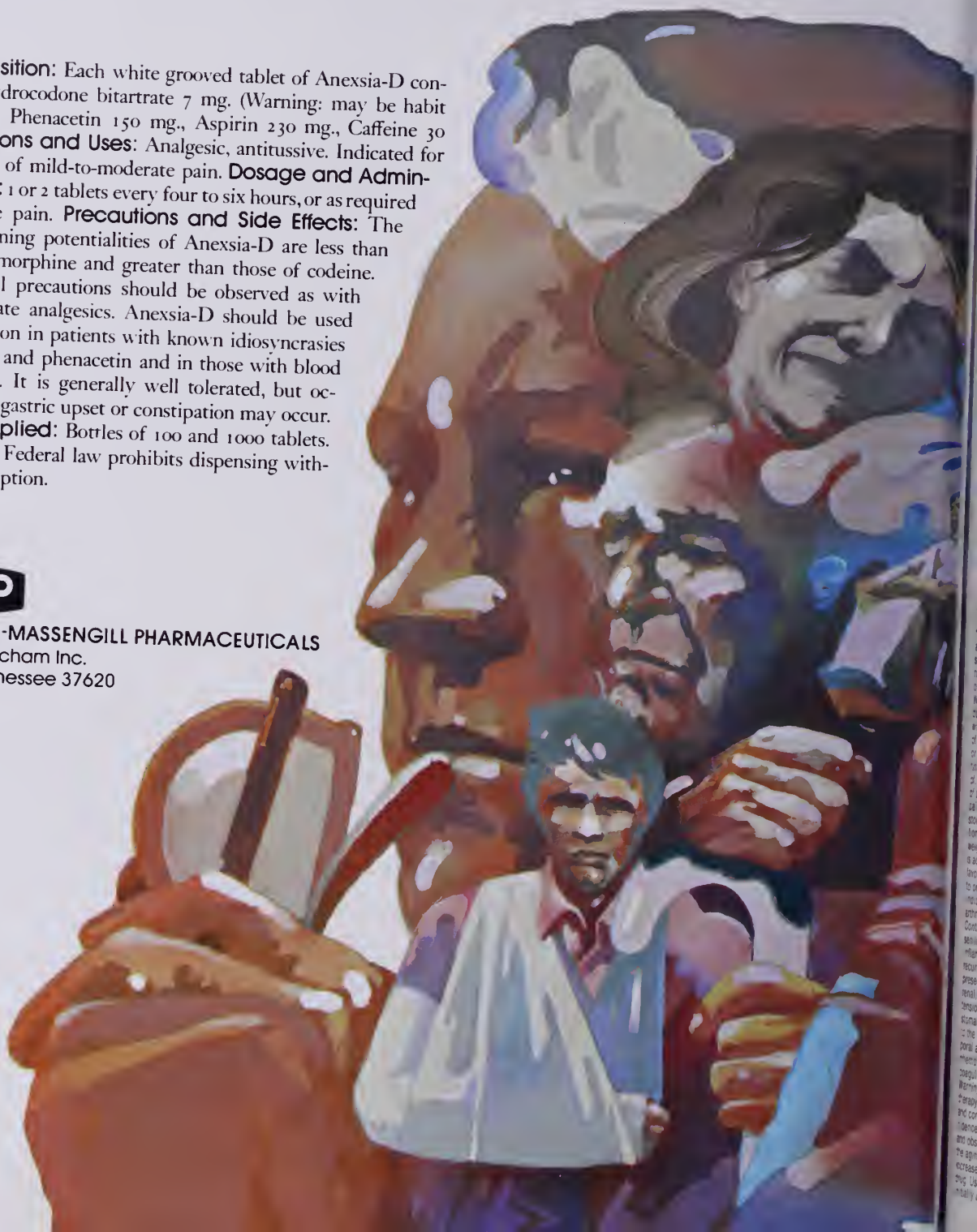
Hydrocodone bitartrate 7 mg. (Warning: may be habit forming), Phenacetin 150 mg.,  
Aspirin 230 mg., Caffeine 30 mg.



**Composition:** Each white grooved tablet of Anexsia-D contains Hydrocodone bitartrate 7 mg. (Warning: may be habit forming), Phenacetin 150 mg., Aspirin 230 mg., Caffeine 30 mg. **Actions and Uses:** Analgesic, antitussive. Indicated for the relief of mild-to-moderate pain. **Dosage and Administration:** 1 or 2 tablets every four to six hours, or as required to relieve pain. **Precautions and Side Effects:** The habit-forming potentialities of Anexsia-D are less than those of morphine and greater than those of codeine. The usual precautions should be observed as with other opiate analgesics. Anexsia-D should be used with caution in patients with known idiosyncrasies to aspirin and phenacetin and in those with blood dyscrasias. It is generally well tolerated, but occasionally gastric upset or constipation may occur. **How Supplied:** Bottles of 100 and 1000 tablets. **Caution:** Federal law prohibits dispensing without prescription.

**BMP**

BEECHAM-MASENGILL PHARMACEUTICALS  
Div. of Beecham Inc.  
Bristol, Tennessee 37620







## acute arthritic inflammation...heat that freezes

In acute rheumatoid arthritis consider Tandearil. The anti-inflammatory action of Tandearil quickly helps reduce heat, pain, swelling, and stiffness. Results are usually seen in 3 or 4 days. Try it for a week when the symptoms defy aspirin control.

Remember that Tandearil is not a simple analgesic. It should not be used on patients responding to routine therapy. Before using, please read the prescribing information. It's summarized below.

## Tandearil® helps take the heat off oxyphenbutazone NF Geigy

Tablets of 100 mg.

**Important Note:** This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions (symptoms of blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

**Indications:** Acute gouty arthritis, rheumatoid arthritis, rheumatoid spondylitis.

**Contraindications:** Children 14 years or less; senile patients; history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia; history or presence of drug allergy; blood dyscrasias; renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema; stomatitis and salivary gland enlargement due to the drug; polymyalgia rheumatica and temporal arteritis; patients receiving other potent chemotherapeutic agents, or long-term anti-coagulant therapy.

**Warnings:** Age, weight, dosage, duration of therapy, existence of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against po-

tential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonyleurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

**Precautions:** The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

**Adverse Reactions:** This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia,

gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement. (B)98-146-800-F (10/71)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals  
Division of CIBA-GEIGY Corporation  
Ardsley, New York 10502



# More than sleep.

your choice of sleep medication  
is wisely based on more than  
sleep-inducing potential

## sleep with relative safety

Chronic tolerance studies have confirmed the relative safety of Dalmane (flurazepam HCl); no depression of cardiac or respiratory function was noted in patients administered recommended or higher doses for as long as 90 consecutive nights.

In most instances when adverse reactions were reported, they were mild, infrequent and seldom required discontinuance of therapy. Morning "hang-over" with Dalmane has been relatively infrequent. Drowsiness, drowsiness, lightheadedness and the like have been the side effects noted most frequently, particularly in the elderly and debilitated. (An initial dose of Dalmane 15 mg should be prescribed for these patients.)

## sleep for 7 to 8 hours without need to repeat dosage

No sleep induction has been as rigorously evaluated in the sleep research laboratory as Dalmane. Insomnia patients given one 30-mg capsule of Dalmane at bedtime, on average: fell asleep within 17 minutes, had fewer nighttime awakenings, spent less time awake after sleep onset, and slept for 7 to 8 hours with no need to repeat dosage during the night.



leep with  
onsistency

Dalmane has been shown to be consistently effective even during consecutive nights of administration, with no need to increase dosage.

Dalmane (flurazepam HCl) is a distinctive sleep medication—a benzodiazepine specifically indicated for insomnia. It is not a barbiturate or methaqualone, nor is it related chemically to any other available hypnotic.

When your evaluation of insomnia indicates the need for a sleep medication, consider Dalmane—a single entity nonnarcotic, non-turpate agent proved effective and relatively safe for relief of insomnia.

# DALMANE<sup>®</sup>

(flurazepam HCl)

## When restful sleep is indicated

**One 30-mg capsule h.s. — usual adult dosage**  
(15 mg may suffice in some patients).

**One 15-mg capsule h.s. — initial dosage for elderly or debilitated patients.**

**Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:**

**Indications:** Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening, in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

**Contraindications:** Known hypersensitivity to flurazepam HCl.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving.) Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

**Precautions:** In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

**Adverse Reactions:** Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.

**Dosage:** Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

**Supplied:** Capsules containing 15 mg or 30 mg flurazepam HCl.



ROCHE LABORATORIES  
Div., Hoffmann-La Roche Inc.  
Nutley, New Jersey 07110

# Opinion & Dialogue

## "Prescription drugs – who should determine the maker?"

### Dispenser of Medicine

Clifton J. Latiolais  
President  
American  
Pharmaceutical  
Association



### Maker of Medicine

C. Joseph Stetler  
President  
Pharmaceutical  
Manufacturers  
Association



"Too many doctors are indifferent to the economic consequences of their decisions." So stated a recent issue of *Medical News Report* (December 4, 1972), an independent weekly newsletter published by former AMA Chief Executive F. J. L. Blasingame, M.D.

#### Doctor, are you indifferent...?

In discussing an anticipated increase in Blue Shield rates, Dr. Blasingame's newsletter had this to say:

"In general, it can be said, MDs have given the impression they are not particularly concerned with the increase in cost of health care to their patients..."

"True, an MD's training is primarily scientific, but in the real world of practice, all of his scientific decisions have a price tag, or an economic impact. The economics of health care beckon the practitioner's attention. Concern for economics of medicine..."

When the pharmacist recommends that a drug product other than the one ordered be dispensed, the prescriber invariably permits the change when he feels the best interests of the patient will be served.

#### Shortcomings of Pro-Substitution Argument

The fact remains that it is necessary for the prescriber to know that the change is being contemplated and to be in a position to consent or demur. Without that opportunity, the unilateral decision of the pharmacist made in the absence of clinical knowledge of the patient, could expose him to needless risks, and in addition, jeopardize the relationship between the professions of Pharmacy and Medicine. In my view, there is nothing in the pro-substitution argument that offsets these risks.

#### The Issue of Drug Knowledge

Substitution advocates claim that the primary justification for changing the rules is the desire to better utilize pharmacists' knowledge about drugs. Yet the pharmacist's task to keep current on the entire field of drug therapy, to some degree puts him at a disadvantage. Most often, a practicing physician will rely on expert knowledge of no more than



ould be an obligation of medical  
practice...

"Medical societies ought to con-  
duct continuing campaigns to point  
out the substantial savings that could  
be realized thru deductible insurance  
and protection for catastrophic ill-  
nesses. At the very least, they should, in  
the patients' interest, question the  
practices of any insurance organization  
that raises health care costs by forc-  
ing policyholders to buy insurance  
they may not need or want and prob-  
ably won't ever use.

"Too many doctors are indiffer-  
ent to the economic consequences of  
their decisions. Too many, for ex-  
ample, habitually hospitalize patients  
for the convenience of the MD. It's  
senseless to deny such habits exist...

"Doctors, thru their medical so-  
cieties, have unhesitatingly appealed  
to their patients for support in the  
fight against government interference  
with the private practice of medicine.  
The public in the past has re-  
sponded. It's time the American Med-  
ical Association and state and local  
medical societies paid off the debt by  
positive action to hold down the cost  
of medical care."

#### Cost of Drugs

Insurance rates and hospital  
charges are only two factors in health

care costs. The cost of drugs—both  
prescription and nonprescription—is  
another.

And when it comes to drug  
costs, the nation's pharmacists are  
*concerned*. Through their national  
professional society, the American  
Pharmaceutical Association, pharma-  
cists are advising the public to use  
nonprescription medication cau-  
tiously and conservatively, and to seek  
the advice of their pharmacist before  
selecting or purchasing such drugs.

#### Outdated Laws

The pharmacist also is aware  
that when it comes to prescription  
drugs, often he has an even greater  
opportunity to reduce the cost to the  
patient—with no sacrifice in the qual-  
ity of the medication dispensed. But  
in many states, outdated and anti-  
quated laws prevent the pharmacist  
from engaging in drug product selec-  
tion. "Drug product selection" simply  
means that the pharmacist functions  
in the patient's interest by con-  
sciously choosing, from the multiple  
brands available, a low-cost quality  
brand of the specific drug to be dis-  
pensed in response to the physician's  
prescription order.

Much *misinformation* has been  
purposely spread by those who stand  
to gain financially by maintaining

high drug costs to the public. An en-  
dless stream of propaganda has ema-  
nated from the drug industry in an  
effort to persuade the medical profes-  
sion that these so-called anti-substitu-  
tion laws should be retained. And as  
long as these laws are retained, the  
drug industry will continue its current  
marketing practices which contribute  
unnecessarily to high drug costs to  
patients. These practices also are in-  
viting government agencies to expand  
their restrictive controls on physi-  
cians and pharmacists.

#### APhA Efforts

As pharmacists, we are con-  
cerned about health care costs. We  
hope that every physician shares our  
concern on this vital issue, and will  
give his personal support to the con-  
structive efforts APhA has undertaken  
in the interest of all patients.

*(For a complete discussion of  
drug product selection, you are invited  
to request a free copy of the "White  
Paper on the Pharmacist's Role in  
Product Selection" from: American  
Pharmaceutical Association,  
2215 Constitution Avenue, N.W.,  
Washington, D.C. 20037.)*

Of drugs that he selects to treat the  
majority of conditions encountered in  
his practice. Moreover, the physi-  
cian's choice of a specific brand is  
based on his knowledge of the pa-  
tient's medical history and current  
condition, and his experiences with  
a particular manufacturer's  
product.

Some substitution proponents  
have argued that the dispensing of a  
prescription is a simple two-party  
transaction between the pharmacist  
and the patient, and that a substitut-  
ion pharmacist may avoid even a  
technical breach of contract by simply  
informing the patient that he is making  
a substitution. I would judge that  
courts would be sympathetic  
toward a pharmacist who substituted  
without physician approval and who  
performed a legal defense that seeks  
to make the patient responsible for  
the pharmacist's actions.

#### Reduced Prescription Prices?

Substitution advocates are  
suggesting to the consumer, and par-  
ticularly the consumer activist, that  
reduced prescription prices could  
allow legalization of substitution.  
I have seen absolutely no evidence  
to justify this claim. To the contrary,  
experience in Alberta, Canada, where  
substitution is authorized, suggests

the opposite.

Many pharmacists understand-  
ably are concerned about the cost of  
maintaining multiple stocks of similar  
products. While there is no doubt that  
inventory costs rise when additional  
brands are stocked, it would be inter-  
esting to know how much they rise,  
and how many pharmacists actually  
stock *all* brands—of, say, ampicillin  
or tetracycline—or how long they  
keep "slow moving" products on their  
shelves before they are returned for  
credit. To ask that the industry elim-  
inate multiple sources is to ask com-  
petitors to stop competing.

#### Drug Substitution—A License for the Unethical

Anti-substitution repeal would  
favor "corner cutting" pharmacists  
and manufacturers. For them, free  
substitution would be not a right, but  
a license. As an aftermath, it is quite  
likely that the confidence of both phy-  
sicians and patients in the profession  
of Pharmacy would be eroded, as  
revelations about the unconscionable  
behavior of an undisciplined few were  
magnified in the press or in profes-  
sional circles.

#### Summary

In short, what the American  
Pharmaceutical Association advo-

cates as a broad-spectrum panacea  
looks to us to be not only a minority  
view (advocacy of substitution is by  
no means a uniform policy in Phar-  
macy), but also an extraordinarily  
costly and ineffective remedy, whose  
side effects are odious. We believe  
(1) that an impressive majority of  
pharmacists prefer to work with  
Medicine and with industry, for the  
consumer, and for the general good,  
(2) that they seek the privilege to sub-  
stitute when the patient might gain  
and when the patient's doctor agrees,  
and (3) that they seek to work for the  
resolution of genuine grievances  
openly and professionally.

*(For amplification of PMA views,  
please write for our booklet, "The  
Medications Physicians Prescribe:  
Who Shall Determine the Source?"  
It is available from: Pharmaceutical  
Manufacturers Association, 1155  
Fifteenth Street, N.W., Washington,  
D.C. 20005.)*

Pharmaceutical  
Manufacturers Association  
1155 Fifteenth Street, N.W.  
Washington, D.C. 20005



# ROCHE announces new

# BACTRIM<sup>TM</sup>

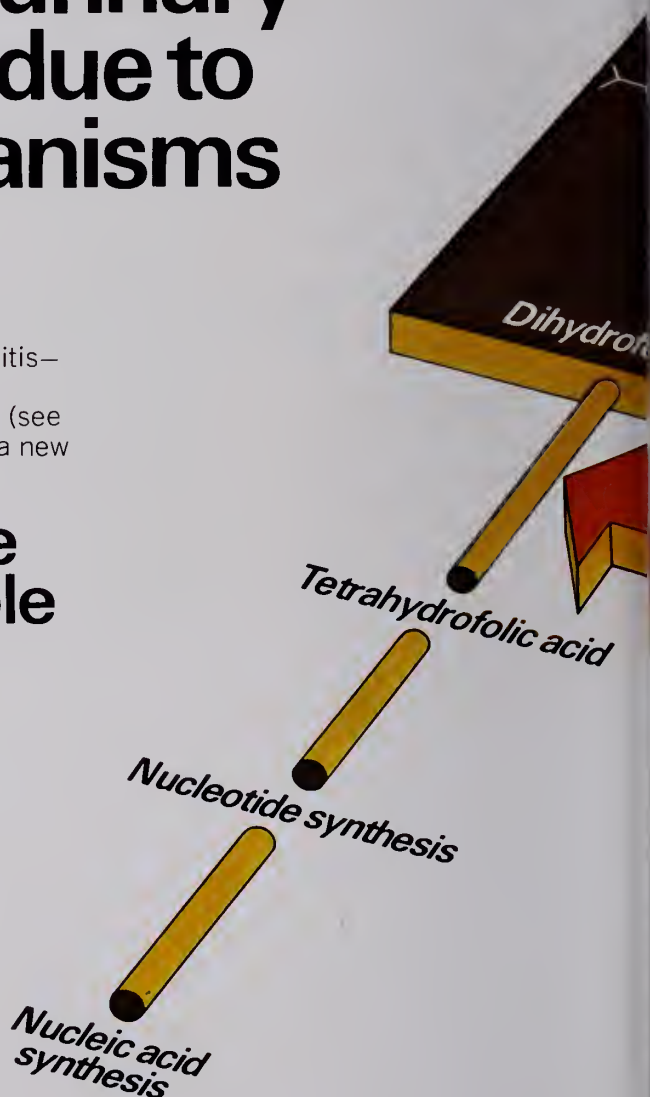
Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

## a new type of antibacterial for a two-pronged attack against chronic urinary tract infections due to susceptible organisms

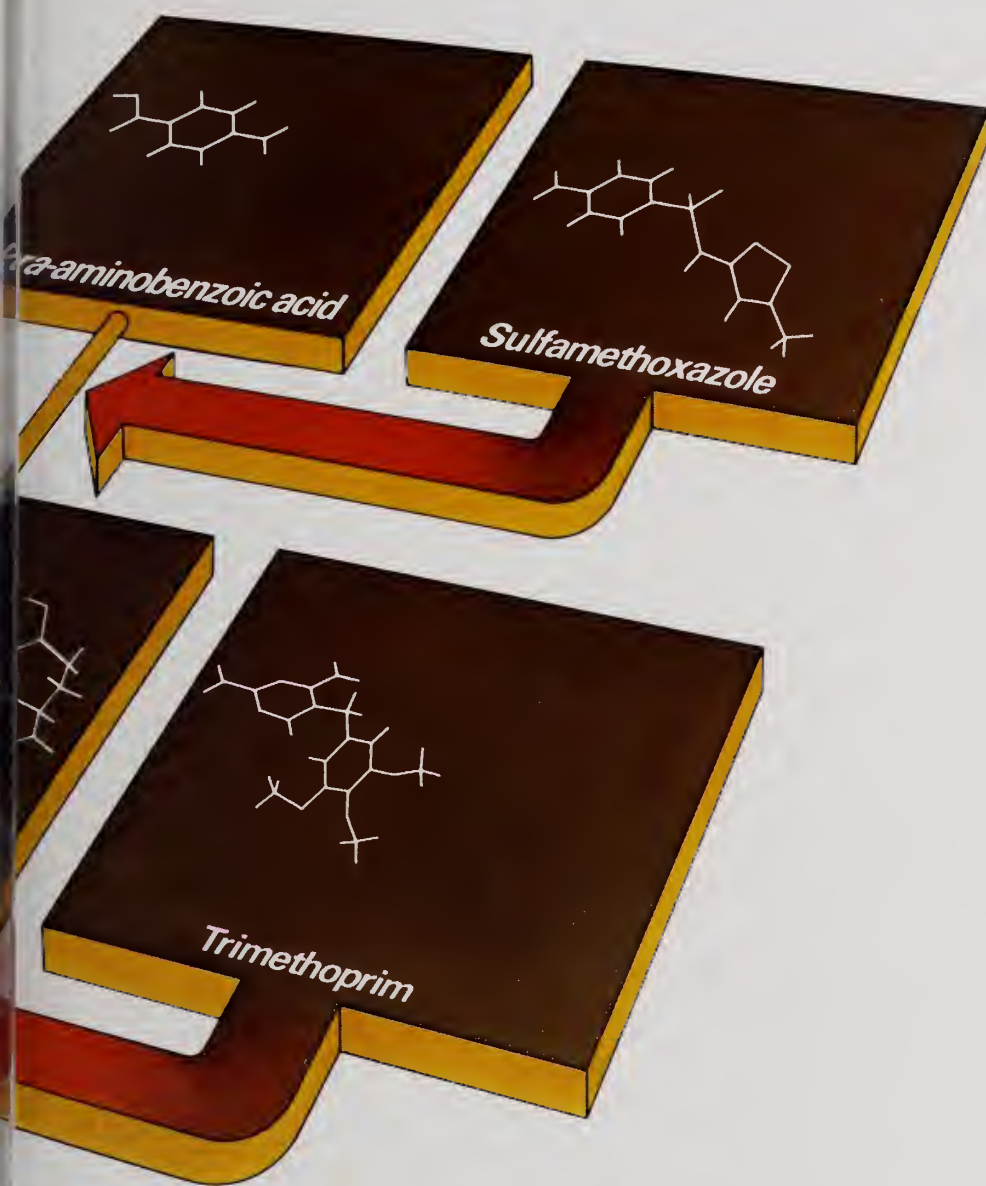
Bactrim is highly effective in the treatment of these infections—primarily pyelonephritis, pyelitis and cystitis—when due to susceptible organisms. This efficacy is related to the unique mode of action against bacteria (see illustration), an action that, in effect, makes Bactrim a new type of antibacterial.

### Bactrim interrupts the life cycle of susceptible bacteria

*Unique mode of action interrupts the life cycle at two important points, thereby impeding the production of nucleic acids and proteins essential to these bacteria. These consecutive interruptions occur because sulfamethoxazole and trimethoprim resemble naturally existing substrates. By competitive replacement of these substrates, they inhibit further synthesis.*







new **BACTRIM**<sup>TM</sup>

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.  
**for chronic urinary tract infections**

Before prescribing, please see complete product information on last page of advertisement.

## Excellent clinical response in chronic urinary tract infections even with obstructive complications

A multiclinic, double-blind study\* of response to a ten-day course of therapy in 471<sup>†</sup> patients with chronic urinary tract infections demonstrated the superiority of Bactrim. On the 10th day after initiation of therapy, 91.7% (of 168 patients) showed significant bacteriological response to Bactrim, compared with 81.2% (of 144 patients) to trimethoprim and 64.5% (of 155 patients) to sulfamethoxazole. More than half of these patients had obstructive complications.

## Excellent response maintained

Bactrim proved equally impressive in maintaining this bacteriological response. In the above study, after a ten-day course of therapy with Bactrim, 68.4% of patients with chronic urinary tract infections *maintained* response for up to 42 consecutive days, compared with 59.7% with trimethoprim and 44.4% with sulfamethoxazole. These results are particularly noteworthy considering the number of patients with obstructive complications—cases regarded as being notoriously difficult to treat.

## Prescribing considerations

**Clinical Limitations:** Currently, the increasing frequency of resistant organisms is a limitation of the usefulness of all antibacterial agents, especially in the treatment of chronic and recurrent urinary tract infections. Not recommended for children under twelve.

**Contraindications:** Hypersensitivity to trimethoprim or sulfonamides. Pregnancy and during the nursing period.

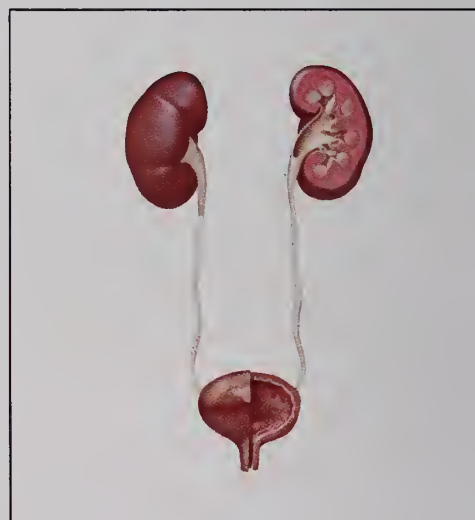
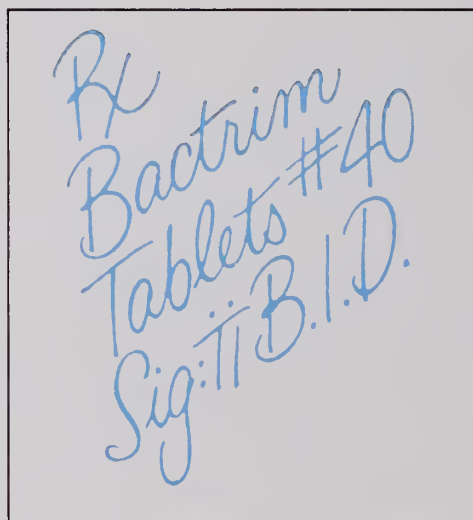
**Warnings and Precautions:** Both sulfamethoxazole and trimethoprim have been reported to interfere with hematopoiesis. Complete blood counts should be done frequently. If a significant reduction in the count of any formed blood element is noted, Bactrim should be discontinued. Bactrim should be given with caution to patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. Maintain adequate fluid intake. Urinalyses with careful microscopic examination and renal function tests should be performed during therapy, particularly for those patients with impaired renal function.

**Adverse Effects:** Among the most common side effects are nausea, vomiting, rash, leukopenia and elevations in SGOT and creatinine.

**Usual adult dosage: two tablets every twelve hours for 10 to 14 days; no loading dose required.**

\*Data on file, Hoffmann-La Roche Inc., Nutley, N.J. 07110

<sup>†</sup>4 patients not available for evaluation at day 10.



**new** **BACTRIM**<sup>TM</sup>

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

**for chronic urinary tract infections**



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110



## Complete Product Information:

**Description:** Bactrim is a synthetic antibacterial combination product, available in scored light-green tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole.

Trimethoprim is 2,4-diamino-5-(3,4,5-trimethoxybenzyl)pyrimidine. It is a white to light-yellow, odorless, bitter compound with a molecular weight of 290.3.

Sulfamethoxazole is N<sup>1</sup>-(5-methyl-3-isoxazolyl)sulfanilamide. It is an almost white in color, odorless, tasteless compound with a molecular weight of 253.28.

**Actions: Microbiology:** Sulfamethoxazole inhibits bacterial synthesis of dihydrofolic acid by competing with para-aminobenzoic acid. Trimethoprim blocks the production of tetrahydrofolic acid from dihydrofolic acid by binding to and reversibly inhibiting the required enzyme, dihydrofolate reductase. Thus, Bactrim blocks two consecutive steps in the biosynthesis of nucleic acids and proteins essential to many bacteria.

*In vitro* studies have shown that bacterial resistance develops more slowly with Bactrim than with trimethoprim or sulfamethoxazole alone.

*In vitro* serial dilution tests have shown that the spectrum of antibacterial activity of Bactrim includes the common urinary tract pathogens with the exception of *Pseudomonas aeruginosa*. The following organisms are usually susceptible: *Escherichia coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis* and indole-positive proteus species.

Representative Minimum Inhibitory Concentration Values for Bactrim-Susceptible Organisms (MIC—mcg/ml)

Bacteria	Trimethoprim alone	Sulfamethoxazole alone	TMP/SMX (1:20) TMP	SMX
<i>Escherichia coli</i>	0.05–1.5	1.0 –245	0.05–0.5	0.95– 9.5
<i>Proteus</i> spp. indole positive	0.5 –5.0	7.35 –300	0.05–1.5	0.95–28.5
<i>Proteus mirabilis</i>	0.5 –1.5	7.35 – 30	0.05–0.15	0.95– 2.85
<i>Klebsiella-Enterobacter</i>	0.15–5.0	0.735–245	0.05–1.5	0.95–28.5

**Human Pharmacology:** Bactrim is rapidly absorbed following oral administration. The blood levels of trimethoprim and sulfamethoxazole are similar to those achieved when each component is given alone. Peak blood levels for the individual components occur one to four hours after oral administration. The half-lives of sulfamethoxazole and trimethoprim, 10 and 16 hours respectively, are relatively the same regardless of whether these compounds are administered as individual components or as Bactrim. Detectable amounts of trimethoprim and sulfamethoxazole are present in the blood 24 hours after drug administration. Free sulfamethoxazole and trimethoprim blood levels are proportionately dose-dependent. In repeated administration, the steady-state ratio of trimethoprim to sulfamethoxazole levels in the blood is about 1:20.

Sulfamethoxazole exists in the blood as free, conjugated and protein-bound forms; trimethoprim is present as free, protein-bound and metabolized forms. The free forms are considered to be the therapeutically active forms. Approximately 44 percent of trimethoprim and 70 percent of sulfamethoxazole are protein-bound in the blood. The presence of 10 mg percent sulfamethoxazole in plasma decreases the protein binding of trimethoprim to an insignificant degree; trimethoprim does not influence the protein binding of sulfamethoxazole.

Excretion of Bactrim is chiefly by the kidneys through both glomerular filtration and tubular secretion. Urine concentrations of both sulfamethoxazole and trimethoprim are considerably higher than in the concentrations in the blood. When administered together as Bactrim, neither sulfamethoxazole nor trimethoprim affects the urinary excretion pattern of the other.

**Indications:** Chronic urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, and, less frequently, indole-positive proteus species).

**Important note:** Currently, the increasing frequency of resistant organisms is a limitation of the usefulness of all antibacterial agents, especially in the treatment of chronic and recurrent urinary tract infections.

**Contraindications:** Hypersensitivity to trimethoprim or sulfonamides. Pregnancy and during the nursing period (see Reproduction studies).

**Warnings:** Deaths associated with the administration of sulfonamides have been reported from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias. Experience with trimethoprim alone is much more limited, but it has been reported to interfere with hematopoiesis in occasional patients. In elderly patients concurrently receiving certain diuretics, primarily thiazides, an increased incidence of thrombopenia with purpura has been reported.

The presence of clinical signs such as sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. Complete blood counts should be done frequently in patients receiving Bactrim. If a significant reduction in the count of any formed blood element is noted, Bactrim should be discontinued.

At the present time, there is insufficient clinical information on the use of Bactrim in infants and children under 12 years of age to recommend its use.

**Precautions:** Bactrim should be given with caution to patients with impaired renal or hepatic function, to those with possible folate deficiency and to those with severe allergy or bronchial asthma. In glucose-6-phosphate dehydrogenase-deficient individuals, hemolysis may occur. This reaction is frequently dose-related. Adequate fluid intake must be maintained in order to prevent crystalluria and stone formation. Urinalyses with careful microscopic examination and renal function tests should be performed during therapy, particularly for those patients with impaired renal function.

**Adverse Reactions:** For completeness, all major reactions to sulfonamides and to trimethoprim are included below, even though they may not have been reported with Bactrim.

**Blood dyscrasias:** Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprolthrombinemia and methemoglobinemia.

**Allergic reactions:** Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis.

**Gastrointestinal reactions:** Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis.

**C.N.S. reactions:** Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness.

**Miscellaneous reactions:** Drug fever, chills, and toxic nephrosis with oliguria and anuria. Periarthritis nodosa and L. E. phenomenon have occurred.

The sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the thiazides) and oral hypoglycemic agents. Goiter production, diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. Cross-sensitivity may exist with these agents. Rats appear to be especially susceptible to the goitrogenic effects of sulfonamides, and long-term administration has produced thyroid malignancies in the species.

**Dosage and Administration:** Not recommended for use in children under 12 years of age.

The usual adult dosage is two tablets every 12 hours for 10 to 14 days.

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	2 tablets every 24 hours
Below 15	Use not recommended

**How Supplied:** Tablets, containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 1000; Prescription Paks of 40, available singly and in trays of 10. Imprint on tablets: ROCHE 50.

**Reproduction Studies:** In rats, doses of 533 mg/kg sulfamethoxazole or 200 mg/kg trimethoprim produced teratological effects manifested mainly as cleft palates. The highest dose which did not cause cleft palates in rats was 512 mg/kg sulfamethoxazole or 192 mg/kg trimethoprim when administered separately. In two studies in rats, no teratology was observed when 512 mg/kg of sulfamethoxazole was used in combination with 128 mg/kg of trimethoprim. However, in one study, cleft palates were observed in one litter out of 9 when 355 mg/kg of sulfamethoxazole was used in combination with 88 mg/kg of trimethoprim.

In rabbits, trimethoprim administered by intubation from days 8 to 16 of pregnancy at dosages up to 500 mg/kg resulted in higher incidences of dead and resorbed fetuses, particularly at 500 mg/kg. However, there were no significant drug-related teratological effects.

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*in study...after study...after study*<sup>1-6</sup>

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The image shows a stack of medical case report forms for 'TOPICAL CORTICOSTEROIDS'. The forms are titled 'CASE REPORT' and 'TOPICAL CORTICOSTEROIDS'. They contain various sections for patient information, medical history, and clinical observations. The forms are filled out with handwritten notes and signatures, indicating they have been used in a clinical setting. The forms are stacked on top of each other, with the top form being the most visible. The forms are white with black text and lines. The handwriting is in black ink. The forms are slightly tilted and overlapping, giving a sense of depth. The background is a light blue color.



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### CLINICAL CONSIDERATIONS:

**Description** VALISONE products contain betamethasone valerate (9-fluoro-11 $\beta$ ,17,21-trihydroxy-16 $\beta$ -methylpregna-1,4-diene-3,20-dione 17-valerate). Each gram of VALISONE Cream 0.1% contains 1.2 mg. betamethasone valerate (equivalent to 1.0 mg. betamethasone) in a soft, white, hydrophilic cream of water, mineral oil, petrolatum, polyethylene glycol 1000 monooctyl ether, cetostearyl alcohol, monobasic sodium phosphate, and phosphoric acid; 4-chloro-m-cresol is present as a preservative. Each gram of VALISONE Ointment 0.1% contains 1.2 mg. betamethasone valerate (equivalent to 1.0 mg. betamethasone) in an ointment base of liquid and white petrolatum, and hydrogenated lanolin. VALISONE Cream and Ointment contain no parabens.

**Indications** VALISONE Cream and Ointment are indicated for the relief of the inflammatory manifestations of corticosteroid-responsive dermatoses.

**Contraindications** VALISONE Cream and Ointment are contraindicated in vaccinia and varicella. Topical steroids are contraindicated in those patients with a history of hypersensitivity to any of the components of the preparation.

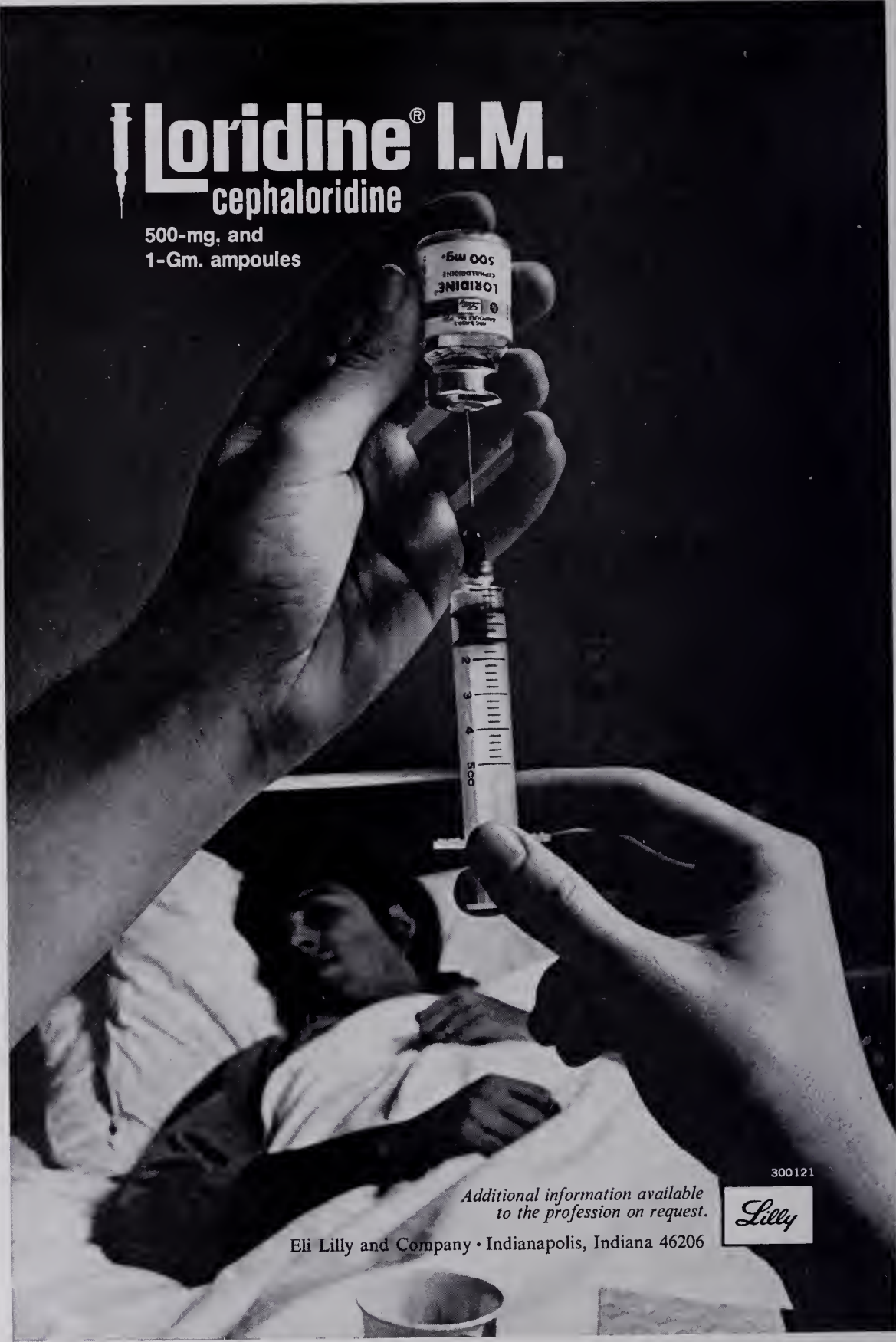
**Precautions** If irritation develops with the use of VALISONE Cream or Ointment, treatment should be discontinued and appropriate therapy instituted. In the presence of an infection, the use of an appropriate antifungal or antibacterial agent should be instituted. If a favorable response does not occur promptly, the corticosteroid should be discontinued until the infection has been adequately controlled. If extensive areas are treated or if the occlusive technique is used, the possibility exists of increased systemic absorption of the corticosteroid and suitable precautions should be taken. Although topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use in pregnant females has not been absolutely established. Therefore, they should not be used extensively in pregnant patients, in large amounts, or for prolonged periods of time. VALISONE Cream and Ointment are not for ophthalmic use.

**Adverse Reactions** The following local adverse reactions have been reported with topical corticosteroids: burning, itching, irritation, dryness, folliculitis, hypertrichosis, acneiform eruptions, and hypopigmentation. The following may occur more frequently with occlusive dressings than without such therapy: maceration of the skin, secondary infection, skin atrophy, striae, and miliaria.

**Dosage and Administration** Apply a thin film of VALISONE Cream or Ointment to the affected skin areas one to three times a day. Clinical studies of VALISONE have indicated that dosage only once or twice a day is often feasible and effective. AUGUST 1972

For more complete details, consult Schering literature available from your Schering Representative or Professional Services Department, Schering Corporation, Kenilworth, New Jersey 07033.

**References:** (1) Files of Headquarters Medical Research Division, Schering Corporation. (2) Carter, V. H., and Noojin, R. O.: *Curr. Therap. Res.* 9:253, 1967. (3) Falk, M. S.: *Cutis* 2:788, 1966. (4) Goldblum, R. W.: *Pennsylvania Med.* 69:50, 1966. (5) Nierman, M. M.: *J. Indiana M. A.* 10:1184, 1966. (6) Zimmerman, E. H.: *Arch. Dermat.* 95:514, 1967.



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## Hereditary Angioneurotic Edema

MICHAEL S. NALL, M.D. and WALTER WILSON, M.D.

Louisville, Kentucky

*A report of an unusual case of hereditary angioneurotic edema presenting with the signs and symptoms of an acute abdomen.*

**H**EREDITARY angioneurotic edema is a relatively rare disorder transmitted as a mendelian dominant. It is characterized by recurrent attacks of acute edema involving the skin, gastrointestinal and upper respiratory mucosa and is probably more common than most physicians recognize.

In 1888, Osler first described the disease in this country when he published the history of a family in which 22 members through five generations had been afflicted.<sup>1</sup> In 1963, Donaldson and Evans found that patients with this disease lacked a specific serum protein, C<sub>1</sub> esterase inhibitor.<sup>2</sup> Unlike other forms of angioedema there is no known allergic basis to this disorder. Donaldson and Rosen reported that in three years they noted more than 100 patients with this condition.<sup>3</sup> A patient with hereditary angioneurotic edema who presented with abdominal pain and the physical findings of acute appendicitis is reported.

### Case Report

C.Y., a 15-year-old white male was admitted to the hospital in October, 1971, with a 24-hour history of abdominal pain, vomiting and low grade fever. He had no past history of recurring abdominal pain. However, at ages five and ten and two weeks prior to admission he had episodes of angioneurotic edema. Each attack was similar, coming on suddenly and in-

volving his face and upper extremities; the swelling was painless and there was no erythema. On each occasion the edema subsided in two or three days. The patient and his family were unable to identify any precipitating factors in these attacks. There was no family history of anyone having recurrent angioneurotic edema.

Upon physical examination, the patient appeared to be a well developed 15-year-old white male in some pain. The abdomen was tender to palpation, more so in the right lower quadrant with slight rebound tenderness. There was no obvious superficial swelling and there was no evidence of other acute or chronic disease.

Laboratory findings on admission revealed the following: Hemoglobin 16.8 gm%; hematocrit 50.5% and leukocytes 15,300 per cu.mm. with 68% polymorphonuclear leukocytes, 8% band forms, 1% eosinophils, 21% lymphocytes and 2% mononuclear cells. Platelets appeared normal on stained smears. The urine was clear with a pH of 6.0 and a specific gravity of 1.032 with no cells, sugar or albumin.

Shortly after admission the patient was taken to surgery and an appendectomy was performed. The surgeon found edema of the mesentery with a large amount of clear fluid in the abdominal cavity; both the colon and small bowel were slightly edematous. The appendix appeared grossly normal. The pathologist reported fibrosis of the appendix and omental fat. Cultures of fluid taken from the abdominal cavity were negative. The postoperative course was uneventful.

Upon discharge from the hospital the patient

underwent an allergy survey. Scratch and intradermal skin test results for a variety of food and environmental allergens were negative except to house dust, *Alternaria* and *Aspergillus*. Total serum complement activity was less than 10% with a normal range of 36 to 52%. Because of these findings the patient was referred to Virginia H. Donaldson, M.D., at the University of Cincinnati School of Medicine. Tests in her laboratory revealed that the patient did have the biochemical defect associated with hereditary angioneurotic edema. His serum lacked the normal inhibitory activity directed against C'1 esterase. Both parents were found to have normal amounts of the inhibitor of C'1 esterase. This indicated that the patient probably represented a mutation which has been identified as the source of this disease in at least four other families.<sup>4</sup>

Following the studies, the patient returned to normal activities including school attendance where he is an excellent student and a member of the swim team. Five months after his surgery he had another rather mild episode of abdominal pain associated with swelling of one of his upper extremities.

### Discussion

The first of four originally described components of complement, C'1, exists in the serum as a proesterase which may be converted to the active C'1 esterase under certain conditions. The human serum normally contains an inhibitor of C'1 esterase which is a specific alpha 2 globulin. Individuals with hereditary angioneurotic edema lack this serum inhibitor activity probably secondary to a decreased synthesis of the protein inhibitor by the liver.<sup>5</sup> It is felt that the edema is due to the C'1 esterase which is increased due to the lack of inhibitor. This is a brief explanation and for a more detailed discussion of the pathogenesis of this disease the reader is referred to a recent work by Austin.<sup>6</sup>

The disease has been found in all ethnic groups and is transmitted as an autosomal dominant trait. It has been reported in patients as young as one week of age and as old as 80. Generally, it is evident by the time the patient is 30 and the symptoms usually become

less severe after 50. A variety of things have been thought to precipitate an attack. Trauma or excessive exercise will often bring on the symptoms. The attacks are usually sudden in onset with no warning. Itching and erythema may be present but are not characteristic. The swollen area is usually pale and cannot be pitted until the edema begins to recede. These patients often have episodes of gastrointestinal involvement. They have severe abdominal pain due to edema of the gastrointestinal wall and may present without visible subcutaneous swelling, making it a difficult diagnostic problem. Involvement of the upper respiratory tract may constitute an emergency because death can occur suddenly from respiratory obstruction.

Treatment of this disease has been unsatisfactory. Spaulding has reported benefit to five patients treated with Methyltestosterone Linquets.<sup>7</sup> Adrenalin has been reported to at least arrest the attack in some cases and our patient did seem to benefit from this drug on one occasion.<sup>8</sup> A plasmin inhibitor, Tranexamic acid, has recently been reported to prevent attacks of edema in some patients with hereditary angioneurotic edema.<sup>9</sup> A tracheostomy may be required with upper respiratory tract involvement and can be life-saving.

### Summary

Hereditary angioneurotic edema must be considered when faced with a patient with abdominal pain and a history of recurrent angioneurotic edema. The family history will give an important clue unless the patient represents a mutation as in the case reported.

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# Percutaneous Removal of Embolized Polyethylene Catheter From the Pulmonary Artery

ROBERT E. DURNIN, M.D.\*, ROBERT J. CASWELL, M.D.\*  
AND LEONIDAS MOSTOWYCZ, M.D.\*\*

Lexington, Kentucky

*Embolization of foreign bodies within the vascular system has been associated with serious complications. Successful percutaneous removal of an embolized catheter from the pulmonary artery by a retrieval catheter is reported.*

RECENT communications have emphasized the serious complications of polyethylene catheter and guide wire embolization within the heart and great vessels.<sup>1,2</sup> Several instruments have been used for successful transvenous retrieval of these intravascular foreign bodies.<sup>3-6</sup>

This report presents our experience with percutaneous retrieval of a polyethylene catheter from the pulmonary artery using a helicoid wire catheter. (Cook, Inc., Bloomington, Indiana). There are five reports of foreign body retrieval from the pulmonary artery.<sup>2</sup>

## Case Report

S.G., a 39-year-old male had a polyethylene catheter inserted for central venous pressure monitoring during a hospital admission following trauma. Initial films at the Veterans Administration Hospital in April, 1971, showed the radiopaque catheter to be positioned in the superior vena cava. Subsequent to this time a chest radiograph in May, 1972, at the Veterans Administration Hospital, (Fig. 1) revealed a long fragment of the polyethylene catheter had embolized and coiled in the main pulmonary artery and its immediate branches. A decision was made to retrieve the displaced

catheter by a transvenous approach in an attempt to avoid open thoracotomy. A Teflon Cook catheter with a movable helicoid wire center (Fig. 2) was introduced through a Mylar sheath into the right femoral vein by the Seldinger percutaneous technique. The retrieval catheter was advanced through the right heart into the main pulmonary artery under fluoroscopic control with electrocardiographic monitoring. Because of catheter stiffness and decreased torque, some difficulty was encountered in manipulation of the catheter through the right ventricular outflow tract. However, no significant arrhythmia was noted. The tip of the embolized polyethylene embolized catheter, lying in the left upper lobe artery, was snared and the 30 cm catheter was quickly withdrawn into the inferior vena cava.

Initially, the retrieval catheter and foreign body could not be withdrawn from the per-



FIG. 1 Chest radiograph revealing embolized polyethylene catheter.

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\*\*Chief, Department of Radiology, Veterans Administration Hospital, Lexington

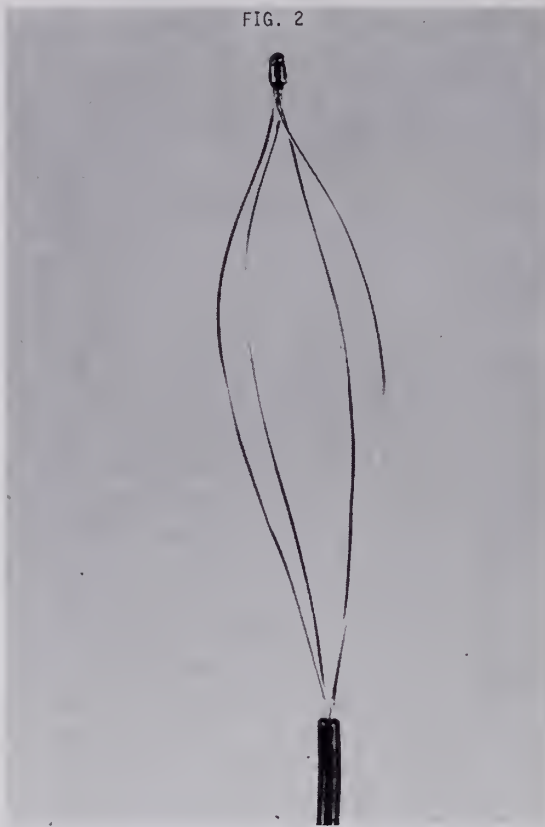


FIG. 2 Teflon Cook catheter with a movable helicoid wire center.

cutaneous entrance site. A small incision was made above the percutaneous entrance site which allowed the application of firm pressure over the vein and facilitated removal of the



FIG. 3 Chest radiograph after removal of Catheter.

retrieval catheter, Mylar sheath and polyethylene foreign body. Small thrombi were noted to be adherent to the polyethylene catheter. Firm pressure controlled oozing from the femoral vein. The small incision was closed with four skin sutures. The total procedure was accomplished in one hour. The patient tolerated the procedure well and was discharged the next day. A chest (Fig. 3) and abdominal radiograph obtained at the termination of the procedure revealed no fragment remnants. A 99 m Tc perfusion lung scan performed one week later was normal.

### Discussion

Serious cardiopulmonary complications have been associated with intravascular foreign bodies within cardiac chambers and great arteries.<sup>7</sup> Superior vena caval syndrome, fatal arrhythmias, sepsis, myocardial necrosis and perforation are recorded serious complications. Experimental studies have shown that extensive pulmonary embolization and vascular occlusion can result from thrombus formation with this foreign body nidus.

Because of significant mortality and morbidity, removal of the foreign body is necessary.<sup>1</sup> In the past, this has frequently necessitated open thoracotomy and laparotomy. Removal of

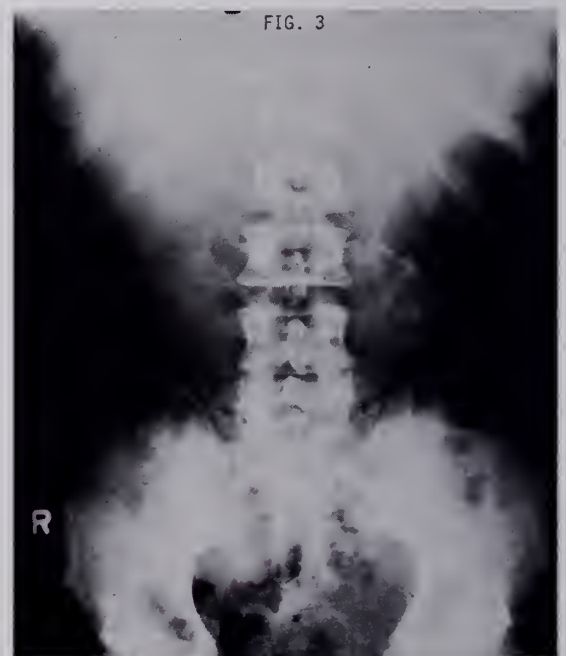


FIG. 3 Abdominal radiograph after removal of catheter.



embolized catheter fragments, venous pacemaker and guidewires by transvenous retrieval instruments has been accomplished thus obviating the need for thoracotomy. Removal of the foreign body should be attempted by retrieval catheter technique unless a large thrombus is evident. Some reports have indicated an angiogram should be performed prior to extraction to ascertain any large thrombi.

Several types of retrieval instruments, both commercial and homemade have been employed.<sup>2,7</sup> These instruments have been introduced by cutdown or percutaneously through jugular, antecubital or femoral veins.

Bronchoscopic forceps introduced through the right jugular vein have been used to snare foreign bodies in the superior vena cava and right atrium. The inflexibility and short length of this forcep limits its application beyond the right atrium. Dormia ureteral stone baskets have been used successfully in extracting foreign bodies in the right heart. Again, this instruments' short length limits it for removal of foreign bodies in the pulmonary artery.

More recently the loop snare catheter (Fig. 4) and helicoid wire catheter (Fig. 2) have been successful.<sup>2</sup> The loop snare catheter is semi-flexible, of suitable length and can be used percutaneously. This catheter was attempted in our case but was abandoned because of difficulty in manipulating the catheter through the right ventricular outflow tract.

The helicoid wire retrieval catheter was easily introduced percutaneously through a Mylar sheath. The stiffness of the catheter and restricted length (65 cm) presented some technical problems when manipulating in the main pulmonary artery. This could be averted by increasing the catheter length. Also the Mylar sheath became shortened and distorted during the procedure.

The loop snare and movable helicoid wire

FIG. 4



FIG. 4 Loop snare catheter.

core catheter appear equally suitable and both may have to be used until successful extraction is accomplished.

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# Psychotherapy as Bio-Psycho-Social Diagnosis and Community Treatment in Kentucky

JOHN H. PARKS, M.D.\*

Frankfort, Kentucky

**I**N 1966, the State of Kentucky initiated the development of a chain of community mental health centers providing mental health-mental retardation services to all citizens of the State. A medically trained psychotherapist, together with other professionally trained social workers, psychologists, nurses and some lesser trained para-professionals constituted the staff of the Center. Clients coming to the Center for services consisted of:

1. Patients seeking diagnosis and treatment for themselves;
2. Community caregivers seeking consultation and educational services in order to help needy persons.

These caregivers were volunteers to or administrators of community agencies such as schools, public health departments, parole boards, juvenile delinquency boards and welfare programs.

The Mental Health Center developed a total method of bio-psycho-social diagnosis which included a variety of diagnostic procedures from general medicine, the behavioral sciences, psychology and psychiatry. The diagnostic approach was applied to both traditional patients and the caregivers. After diagnosis, the appropriate combination of remedies were selected: drug therapy, nutritional therapy, physical education therapy, recreational therapy, educational therapy, financial assistance, vocational therapy or referral to a specialized community group or community institution. The appropriate range of remedies for each diagnostee utilized total community as well as mental health center resources. With appropriate community utilization, the community helps meet the needs of the patient, and the patient and the caregiver each contribute to the goals and purposes of the community.

\*Medical Director, Bluegrass West Comprehensive Care Center, Frankfort

## The Diagnostician-Diagnostee Relationship

### THE INITIAL CONTACT

The medically trained psychotherapist or psychiatrist with his knowledge of the basic sciences of medicine, together with his knowledge of the many differing methods in the field of psychotherapy, structures and supervises the overall bio-psycho-social diagnostic procedure.

At the end of the initial interview, during which the patient or caregiver outlined to the diagnostician what he considers to be his major problems, the diagnostician indicates to the patient or caregiver his conception of the constitution of man and the overall process of bio-psycho-social diagnosis. Appropriate books or pamphlets can be given to the patient to read. Biographies of individuals having successfully completed a bio-psycho-social diagnosis are particularly helpful in the beginning to facilitate the patient's or caregiver's identification with the process of psychological work.

A central concept in outlining the constitution of man is the recognition of the central core of the self, Freud's observing ego, the persistent "I-Consciousness", distinct from the changing biological, psychological and sociological states. The diagnostician indicates how he will ally himself with the central self of the patient or caregiver, and in partnership, the bio-psycho-social diagnosis will be undertaken. An understanding of identification with transient selves, and the process of disidentification from these transient selves so as to lead to the experience of the central core of self, is best demonstrated by the use of Assagioli's "Exercise in Disidentification."<sup>1</sup> The patient or caregiver is shown this exercise during the first interviews, asked to practice it daily, pointing out the experienced central self will provide the direction in alliance with the diagnostician for the total process of bio-psycho-social diagnosis. The "Training of the Will"<sup>1</sup> is another



fundamental technique taught by Assagioli which is intimately connected with the experienced central self. This technique should be recommended to patients or caregivers early in the bio-psycho-social diagnostic work, and particularly on the initiation of the treatment process, so as to insure a responsible intensity of effort and work on the part of patient or caregiver.

#### BIOLOGICAL DIAGNOSIS

Because of the advances of psychopharmacology and orthomolecular medicine during the past 15 years, a complete bio-psycho-social diagnosis of a new patient cannot be relegated to an outside physician unattached to the mental health center, as originally advocated by Freud and later depth psychologists. However, with respect to two physicians working cooperatively in the same clinic, one of them could take the major responsibility for biological, as opposed to sociological or psychological diagnosis. With regards to the medical history and diagnosis, a careful review of all systems is undertaken with a high index of suspicion that nutritional deficiency, malabsorption, toxicity, allergy or metabolic imbalance are involved in the patient's symptomatology.

A careful detailed analysis of the diet is made to assess balance and adequacy of required nutrients. A variety of blood chemistries are drawn.\*<sup>2</sup>

#### PSYCHOLOGICAL DIAGNOSIS

A mental status examination of the patient or caregiver on the part of the physician is of importance in providing an objective diagnostic classification of the patient. The major question to be answered during each mental status examination from the practical point of view of patient management is: What is the ego strength, the insight and the depth of perception of the patient in regard to his total life situation? A careful assessment of this ego strength factor is crucial in making decisions such as hospitalization, use of psychotropic drugs, frequency of clinic visits, role of family and friends in the therapeutic process, legal

consideration of competency and commitment to a psychiatric hospital.

For individuals who possess good ego strength with a diagnosis of psychophysiological reaction, psychoneuroses, character disorder or situational and adjustment reactions, the larger the degree of responsibility taken for their own bio-psycho-social diagnostic process, the better the final outcome as far as optimal change.

Insofar as possible, the psychological diagnostician allies himself with the observing part of the ego of the diagnostee, so that together they become fully aware and value order the contents of consciousness of the diagnostee. The patient or caregiver takes his full share of responsibility in this task. With patients with defects in ego strength, such as mental retardation, the diagnostician takes more responsibility, but still makes an effort to cooperate with the patient's own initiative and insight as much as possible in the task of psychological diagnosis. With intelligent, inquisitive patients, it is quite in order during the biological phase of diagnosis to refer the patient to pertinent books on nutrition or orthomolecular medicine. A bio-psycho-social diagnosis is first and foremost a process of education for the patient.

In a similar fashion, other significant books on social processes or psychology can be recommended by the diagnostician at the appropriate point in the psychological and social phases of the diagnostic procedure. Reading should be done in a thoughtful, reflective, non-hurried manner, so as to raise issues of crucial personal importance to the life of the patient. The patient should be encouraged to become aware and understand the chief features of his conscious and his subconscious personality. The psychological diagnostician must place a high premium early in the diagnosis of his active listening, much in the tradition of psychoanalysis and existential psychotherapy. The psychological diagnostician may elect to suggest one or more of a variety of diagnostic techniques which have proved useful in psychotherapy since the time of Freud; for example: writing a biography, keeping a daily diary, completing any one of a number of psychological tests and questionnaires, psychoanalytic free association, Jung's Association Test, dream analysis, expressive techniques,

\**(Glucose Tolerance Test, Plasma PH, Total CO<sub>2</sub> Content of Plasma, Hematocrit, Total Lipids, Complete Blood Cell Count, Hemoglobin, Calcium, Blood Urea Nitrogen, Alkaline Phosphatase, Albumin, Globulin, Inorganic Phosphorous, Glucose, Uric Acid, Cholesterol, Total Protein, Bilirubin, LDH, SGOT)*

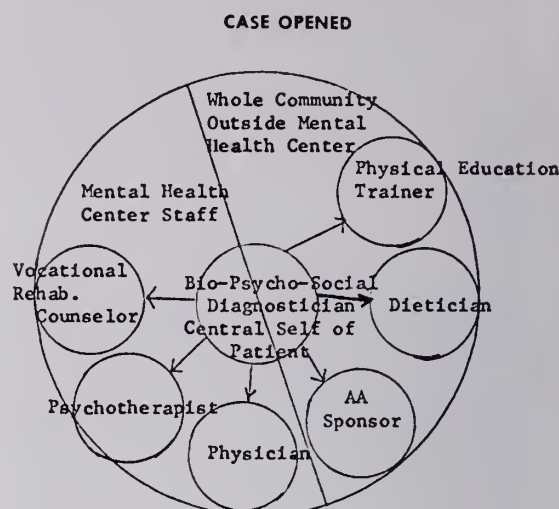
such as free drawing, free movement, clay modeling, projective techniques, such as the TAT, Rorschach, Drawing of the Tree, Szondi, Initialed Symbol Projection of Leuner, Verbal Catharis, etc. A manual of a variety of these psychodiagnostic techniques has been published by Roberto Assagioli.<sup>1</sup> The crucial factor in the use of each such diagnostic technique is that the psychodiagnostician has had some experience with the technique by its use on himself or others, and that the immediate situation with the patient calls for such a technique. A given technique must be seen as only one aspect of the larger existential doctor-patient relationship in all its broader ramifications.

When a bio-psycho-social diagnosis is commenced, such an undertaking should be considered the most important activity of one's life. For many persons, a vacation from work, from family and friend will be necessary to insure a successful outcome of psychological work. The caregiver of the patient should see the diagnostician frequently enough to insure that at least several hours a day are devoted to psychological work. Generally, several interviews a week are required at first, with less frequent interviews later on at such times as the caregiver or patient feels confident enough to proceed more independently. Excess prolonged dependency on the diagnostician is not encouraged.

#### SOCIOLOGICAL DIAGNOSIS

A careful detail inquiry is made into the patient's membership in various community groups: family, church, civic, vocational and recreational. In patients with a marked reduction of bio-psycho-social functioning, such as cases of mental retardation, schizophrenia or organic brain syndrome, care is taken to acquire the necessary anamnestic data from close family members, friends or other community individuals who are willing to share some responsibility for the overall functioning of the patient. With children, family diagnosis and school classroom diagnosis is essential to the full understanding of the case. In adult patients with good ego strength, stable group membership need not be a necessary factor in successful treatment, as such a person can decide to leave a non-fulfilling group and join a group

#### A. Patient-Bio-Psycho-Social-Diagnostician Relationship (Active) and Treatment Team (Active).



more suited to his needs. This is not the case, however, with children, patients with limited ego strength, or other marked limitations (financial, physical, intellectual, vocational, etc.). In these latter cases, an individual representing the group of which the patient is a member must be included in the overall diagnostic and treatment plan (e.g., teacher in school, Alcoholics Anonymous sponsor, etc.). A full utilization of all pertinent community resources is essential for adequate diagnosis and treatment of persons with reduced ego strength.

#### TREATMENT

A successful bio-psycho-social diagnosis is necessary for successful treatment. Care should be taken to insure sufficient time for diagnosis without prematurely settling for a limited understanding of the case. Efforts at premature treatment by drugs, symptom removal techniques and mass group psychotherapy without a careful understanding of the whole person by the diagnostician and the patient or caregiver himself, lead to states of chronic dependency on therapists and their treatment techniques. If the diagnosis places a central value on the central self of the patient or caregiver, if it emphasizes the training of his will, together with a thorough understanding of himself biologically, psychologically and sociologically, such experience and knowledge gained will liberate and free the patient and



caregiver from excessive dependency on therapists and their treatments. Better a six-month period of diagnosis and a one-month treatment than one month diagnosis and six years treatment.

After a careful, detailed, if necessary, prolonged bio-psycho-social diagnostic work where the patient or caregiver has gained as much insight as possible into his problems, the diagnostician and the patient or caregiver, together with the patient's intimate family members in some cases, meet together to form a cooperative plan of action. The diagnostician works toward helping establish conviction and motivation of the patient or caregiver towards possible solutions of his problems as implied by the bio-psycho-social diagnosis. Diagnostician and patient or caregiver then plan together various steps involved in working out the agreed upon solutions. Such steps may involve a number of different individuals working together as a team, and held together by the bio-psycho-social diagnosis. The diagnostician acts as a facilitator and coordinator of the treatment plan.

The treatment solutions are implemented by the various staff members of the mental health clinic, the patient or caregiver, and various members of the community. The conscious and planned reconstruction of the personality by means of transformation, sublimation, and direction of psychological energies, the strengthening and maturing of weak or undeveloped psychological functions, and the activation of superconscious energies; realignment of memberships in social groups, changes in job, change in relationship to family members, starting or stopping education, dietary and exercise changes, ingestion of psychotropic drugs, cultivation of positive emotional attitudes and increase in creativity and productivity at work and with fellow humans, can all be considered active solutions implied by the careful bio-psycho-social diagnosis.

The caregiver or patient commits himself to these changes and in partnership with the facilitating diagnostician, assumes full responsibility in carrying them out. The will of the patient or caregiver is to be **trained**, not **violated**!

With patients with poor ego strength, the above decisions will have to be implemented

by family members and close intimate friends. Decisions as to hospitalization, supervision programs, day care center programs, etc. will have to be made by the mental health center in conjunction with those human beings most intimately related to the patient.

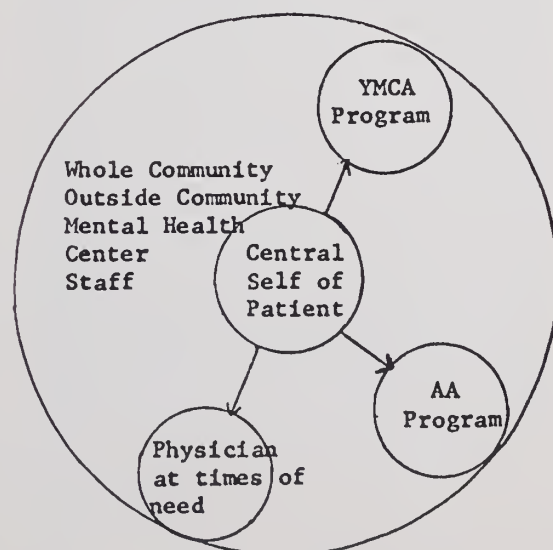
There is no end to psychotherapy as a community process involving a number of persons working towards the betterment of the patient or caregiver. However, as the process continues in time, the diagnostician may terminate the case, believing that the individual himself can adequately follow through on his life treatment plan, and make the necessary "community adjustment" without his help.

A typical patient or caregiver might find himself dealing with the following "team" of mental health clinic workers and outside community workers:

1. A physician administering a psychotropic drug.
2. A dietician advising about diet and food supplements.
3. A physical education trainer teaching coordinated muscular exercises.
4. A vocational rehabilitation counselor who arranges an educational program for training for a new job.

B. Patient-Bio-Psycho-Social-Diagnostician Relationship (Terminated) and Treatment Team (Terminated). The treated patient continues his relationship to community institutions on his own initiative.

#### CASE CLOSED



5. A member of Alcoholic Anonymous who encourages the patient or caregiver to go to AA meetings.

6. A psychotherapist working with the patient or caregiver on a conscious and planned reconstruction of his personality.

The physician, the psychotherapist and the vocational counselor are members of the mental health clinic staff. The others are outside community workers who, however, are part of the total treatment team which is activating the treatment plan agreed upon by the patient or caregiver and the bio-psycho-social diagnostician.

### Summary

Psychotherapy is, therefore, to be considered as the totality of processes involved from the time the caregiver or patient comes to the

mental health center from the community, until such time as he returns to the community. This process is continuously catalyzed by the bio-psycho-social diagnostician.

Psychotherapy, then, is the thoughtful consideration given to the interaction between the individual and his society. Within the limits of the intelligence, insight and ego strength of the patient, he should be fully involved in the process of this consideration, particularly as it involves his own particular bio-psycho-social needs, and certain institutions of his society to which he can relate in a cooperative and productive manner.

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## Manuscript Memos

*Manuscripts should be submitted in duplicate to The Journal of KMA, an original copy and one carbon, and typed with double spacing. Maximum length of an article should not exceed 4500 words; the Board of Consultants on Scientific Articles prefers that they be briefer than this when possible.*

*In submitting a manuscript, the author is requested to include a concise summary, not to exceed 35 words, to be used as a sub-title when the article is published in The Journal. The purpose of the summary is to create additional interest and encourage greater readership.*

*Footnotes and bibliographies should conform to the style of the Quarterly Cumulative Index Medicus published by the American Medical Association. This requires in the order given name of author, title of article, name of periodical, with volume, page, month—day of month if weekly—and year. The Journal of the KMA does not assume responsibility for the accuracy of references used with scientific articles.*

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# GRAND ROUNDS



The University of Louisville School of Medicine

This Journal feature will be presented alternately by the University of Louisville and the University of Kentucky Departments of Medicine and Departments of Surgery. We hope to have these features revolve around subjects of immediate practical interest to the practicing physician; and, for those of us not able to attend grand rounds in the teaching centers as often as we might, we hope this will represent a bit of a refresher course.

## Barlow Syndrome

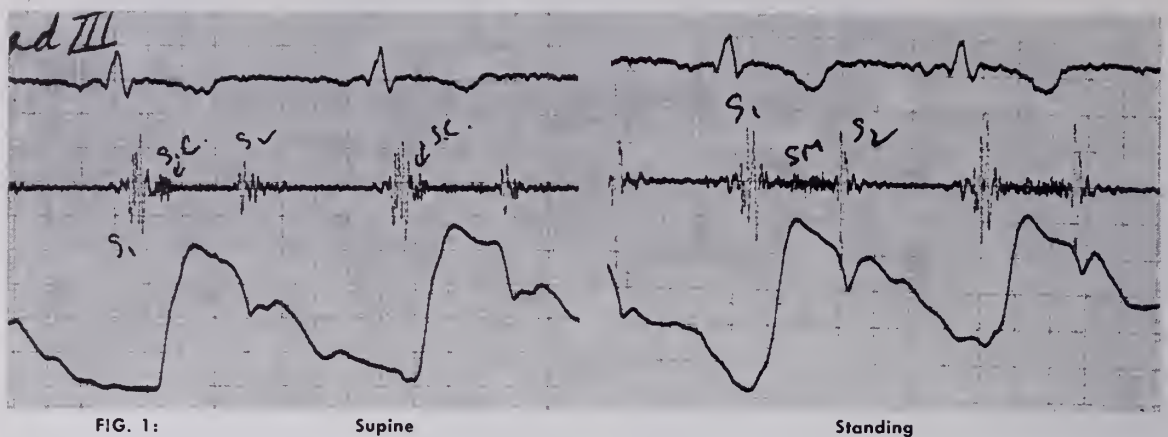
**F**OR many years mid-systolic clicks noted on auscultation were attributed to extracardiac events. In 1963, J. B. Barlow, M.D. described seven cases with mid-systolic click with or without late systolic murmurs. Since that time, considerable attention has been given this set of findings known variably as Barlow syndrome, mid-systolic click, late systolic murmur syndrome, the floppy mitral valve syndrome and several other terms. Among the several patients with this disorder that we have evaluated, three were of special interest and point up the importance of recognizing such patients. These three patients emphasize the possible misdiagnosis of patients with Barlow syndrome as having congenital shunt lesion, rheumatic mitral disease and coronary atherosclerotic heart disease.

*Case 1. (R.B.)* This 20-year-old male was noted to have a heart murmur soon after birth. Mental retardation was first noted at age five. He has had no cardiac symptoms and has required no cardiac medication. Scarlet fever occurred at age six, but there was no history of rheumatic fever. The patient was referred to us with a clinical diagnosis of ventricular septal defect. The physical findings were highly compatible with that diagnosis and included normal vital signs, normal jugular venous and carotid pulses. There was no detectable cardiomegaly but a systolic thrill was felt at the lower left sternal border. A grade IV/VI high frequency murmur was heard best at the lower left sternal border, clearly obscuring the first heart sound and extending into the second heart sound. There were no diastolic murmurs. EKG and chest x-ray were normal. Echocardiography showed early systolic prolapse of the posterior leaflet of the mitral valve into the left atrium. This was confirmed at cardiac catheterization

along with moderate mitral regurgitation and normal intracardiac pressures. There was no shunt lesion present.

*Case 2. (A.L.)* This 30-year-old female registered nurse was referred in March, 1972, for evaluation of palpitations, dyspnea and suspected rheumatic mitral regurgitation. There was no history of heart murmur at birth and no history to suggest acute rheumatic fever. Palpitations intermittently treated with Inderal had been present along with vague complaints of fatigability and sharp chest pains for 4½ years. Two pregnancies, three and five years previously, had been uncomplicated but the patient had been advised against further pregnancies in view of the cardiac findings suspected to represent rheumatic mitral disease. Several recent episodes of palpitations lasting several minutes, along with dizziness, had been noted and hospitalization had been required. On examination, vital signs were normal. The patient is somewhat tall and a moderate pectus excavatum was noted but there were no other features to suggest Marfan syndrome. Jugular venous and carotid pulses were normal. No cardiac enlargement or thrills were present. S-1 was accentuated and S-2 was normal. A loud click was noted in mid-systole, followed by a systolic murmur. On standing, the click moved closer to S-1 and the murmur became grade IV/VI intensity (Fig. 1). The electrocardiogram showed T wave inversion in leads III and AVF. Chest x-ray was normal except for the pectus excavatum. Holter monitoring revealed occasional nodal and ventricular premature contractions. The patient has subsequently completed an uneventful third pregnancy and delivery and is asymptomatic on low dose Inderal therapy.

*Case 3. (A.M.)* This 47-year-old male



executive was referred for evaluation of probable coronary atherosclerotic heart disease. The patient reports a heart murmur was discovered on physical examination at 18 years of age. In 1961, a routine EKG demonstrated non-specific ST-T changes in leads II, III and AVF, suggestive of ischemia. About 1966, he began having a sharp, stabbing left chest pain not related to exertion. About 1969, he began experiencing intermittent episodes of palpitations of short duration. A few weeks prior to being seen, his EKG demonstrated further ST-T abnormalities in leads II, III and AVF, even more suggestive of ischemia and he was referred to us for evaluation.

On physical examination the blood pressure was 128/72 and pulse 70/min with an occasional ectopic beat. The carotids and venous pulses were normal. The precordium was normal to palpation. The first heart sound was accentuated and the second sound was normal. No third or fourth heart sounds were present. There was an apical grade II/VI late systolic murmur in the supine position. On standing, the murmur became II-III intensity and pansystolic. The peripheral pulses were normal. The electrocardiograms over the past few years were reviewed and showed T wave inversions limited to leads II, III and AVF. Occasional PVC's were noted at rest and became more frequent during treadmill exercise but no diagnostic ischemic changes occurred.

### Discussion

In this discussion we have chosen to use the term Barlow syndrome to refer to the set of findings referred to in the literature by many different terms such as the mid-systolic click-

late systolic murmur syndrome, parachute mitral valve, prolapsing mitral valve and myxomatous degeneration of the mitral valve leaflets.

The three cases presented demonstrate the extreme importance of recognizing this disorder and differentiating it from diseases with quite different prognoses.

The presenting complaints of patients with Barlow syndrome are summarized in Table 1. As can be noted, these complaints are non-specific but can be most disturbing to the patient and physician alike. The palpitations are usually due to ventricular premature contractions as shown by continuous tape monitoring in one of our patients (A.L.), and they often become more frequent during exercise as shown during treadmill testing in patient A.M. The atypical chest pain remains unexplained and in most cases is probably due to anxiety and hyperventilation, as are the complaints of dyspnea and dizziness.

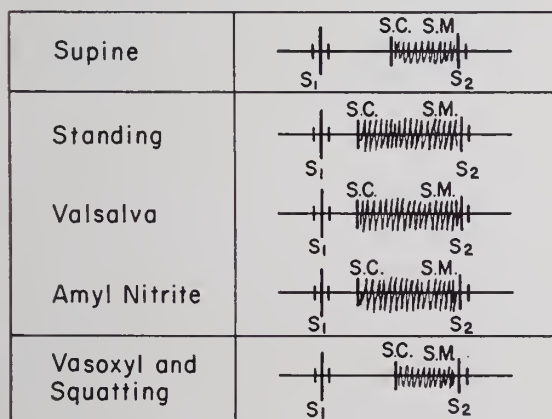
The physical examination of patients with Barlow syndrome reveals characteristic findings and the diagnosis can be made by very simple bedside maneuvers (Fig. 2). The general cardiovascular examination is normal except for auscultation. Venous and arterial pulses are normal and no cardiomegaly is detected. On auscultation at the apex in the supine position, one typically hears a mid-systolic click followed by a crescendo systolic murmur. On occasion, one can hear the click without the murmur or the murmur without the click, but the significance remains the same. Maneuvers which reduce venous return and decrease heart size (standing, Valsalva, amyl nitrite) result in the click occurring earlier in systole and the murmur becoming louder and



longer as shown in Fig. 2. Maneuvers which increase peripheral resistance and enlarge the left ventricle tend to delay the click and soften the murmur. The mechanism by which these events take place is generally understood as follows: In most cases of Barlow syndrome, the chordae tendineae are congenitally elongated and this allows for systolic prolapse of one or both mitral leaflets into the left atrium with the posterior leaflet most often affected. The sudden tensing of these elongated chordae produces the click while the prolapse of a mitral leaflet allows mitral regurgitation which creates the systolic murmur. Maneuvers which reduce left ventricular systolic size result in a relative further elongation of the chordae tendineae causing an earlier prolapse of the mitral leaflet which results in the earlier occurrence of the systolic click and murmur.

The electrocardiogram is generally normal or shows T wave inversion in leads II, III and AVF and occasionally also leads  $V_4 - V_6$  (Fig. 3). These changes are not fully explained but may be related to the elongated chordae causing excessive stress on the posterior papillary muscle and underlying myocardium. Several patients with Barlow syndrome have undergone coronary angiography and these have generally revealed no major coronary artery disease.

Chest x-ray examination can be helpful in differential diagnosis since it will usually be normal, unlike the chest x-ray in rheumatic



S<sub>1</sub> - 1st heart sound  
S<sub>2</sub> - 2nd heart sound  
S.C. - Systolic click  
S.M. - Systolic murmur

FIG. 2

Table 1

## BARLOW SYNDROME

Palpitations  
Atypical chest pain  
Asymptomatic heart murmur  
Vague dyspnea and dizziness  
Abnormal EKG

and congenital heart lesions.

In the majority of cases further diagnostic studies are not required to confirm the diagnosis of Barlow syndrome. Echocardiographic studies are certainly of interest and can demonstrate the systolic separation of the mitral leaflets with herniation into the left atrium. Continuous electrocardiographic monitoring can clarify the nature of any rhythm disturbance and facilitate proper treatment. Treadmill exercise testing will generally show no ischemic changes but may reveal the nature of rhythm changes. Should the diagnosis remain in doubt, cardiac catheterization and angiography can be of further assistance in evaluating cardiac hemodynamics, severity of mitral regurgitation and the coronary arteries. Systolic prolapse of a mitral leaflet with mitral regurgitation can be seen with left ventricular angiography.

The prognosis in Barlow syndrome is generally excellent unlike that of rheumatic mitral disease and coronary atherosclerotic heart disease. Herein lies the importance of correct diagnosis in such cases and this can be appreciated in the cases presented above. In the majority of cases, no complications occur and patients with Barlow syndrome can look forward to a normal life expectancy. There are a minority of cases, however, who do suffer one or more of the complications listed in Table 2.

Treatment in Barlow syndrome is generally symptomatic. In most cases reassurance is all that is necessary to control the anxiety created

Table 2

## COMPLICATIONS OF BARLOW SYNDROME

Arrhythmias  
Severe mitral regurgitation (? ruptured chordae tendineae)  
Bacterial endocarditis  
Syncope  
Sudden death

by palpitations and the awareness of a cardiac disorder. Should palpitations become disabling, appropriate antiarrhythmic therapy should be instituted after the exact nature of the rhythm disorder has been established. Unfortunately there are reports of malignant arrhythmias such as ventricular tachycardia occurring in such patients and the reported sudden deaths are undoubtedly due to arrhythmias. Prophylactic antibiotics should be used at any time the patient may be exposed to bacteremia to prevent the development of endocarditis. Should the mitral regurgitation become hemodynamically significant, cardiac failure may ensue and digitalis and diuretics may be required. The mitral regurgitation may become severe enough to require mitral valve replacement.

### Summary

Three patients with varied manifestations of the Barlow syndrome are presented and discussed. Although considered to be a rare disorder by many, we suspect that Barlow syndrome is, in fact, a relatively common condition that is simply misdiagnosed as rheumatic mitral disease, congenital heart disease or coronary artery disease. This condition can be accurately diagnosed at the bedside and the prognosis and management of such patients is vastly different from that of patients with rheumatic or coronary heart disease.

LOWELL ROBERTS, M.D.

ROBERT R. GOODIN, M.D.

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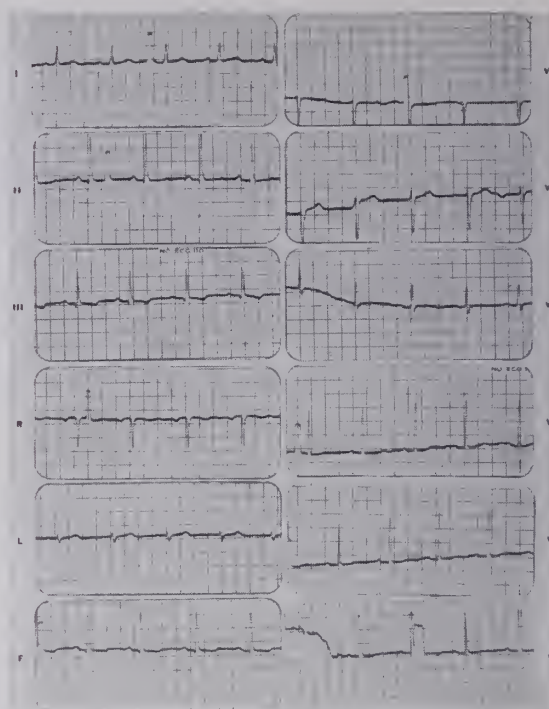


FIG. 3

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## SPECIAL ARTICLES

### How Do We Measure Up?—Health Insurance†

HAROLD B. MCGUFFEY\*

**T**HE Kentucky Insurance Department has licensed almost 400 life and health insurance companies. These companies annually submit some 14,000 policy or rate filings for the Department's consideration. Since both the policies and the accompanying sales material must have Departmental approval prior to being used, our Life and Health Division is extremely busy seeing that these items conform to our law and regulations. In 1972, the Department disapproved 10.21% of all filings it reviewed.

The Insurance Department does not have control over health insurance rates, although the law requires that benefits must be commensurate with the rates. On occasion, we disapprove a policy and its rates or a requested rate increase because of failure to live up to this requirement.

**We do have absolute control over rates for Blue Cross-Blue Shield contracts.** You are probably aware that Blue Cross and Blue Shield are subject to Subtitle 32 of the Kentucky Insurance Code, since they are classified as a "nonprofit hospital and health service corporation." Blue Cross-Blue Shield cannot be called an insurance company; nor can they use the word "insurance" in their title.

The Department has a multitude of problems with health insurance. The coverage is often misunderstood and sometimes misrepresented. A startling number of the complaints we receive are about health insurance. In 1972, we had 3,150 such complaints, and we were able to recover \$466,408 for aggrieved policyholders. It is of particular concern to me that Kentuckians should have quality health insurance, as well as proper health care.

†Notes from an address before the KMA Interim Meeting at Lake Barkley State Resort Park on Thursday, March 29, 1973.

\*Commissioner of Insurance, Commonwealth of Kentucky.

A possible approach to providing quality health insurance is to set "minimum benefits" or minimum levels of acceptable coverage. However, there are definite disadvantages here. For example, can a minimum level of benefits keep up with the inflationary trend in health care costs? And is it possible that in five or six years we may have built up a false sense of security, since the minimum benefits will by then no longer be adequate? If we design a program to escalate with inflation and rising premiums, what will happen to the people who can't afford the minimum level of benefits? They may become the responsibility of the State—if so, where will the money come from?

Of course, it would take an act of the Legislature to permit Kentucky to try a minimum benefits program. Only one state—California—has legal authority for this, and their program just began January 1, 1973. Here are some highlights from the California health regulations:

The regulations prohibit any **basic hospital benefit** under \$30 a day for less than 60 days. Major medical policies and "dread disease" coverages must pay at least \$50 per day.

Let me comment here that I'm opposed to the \$30 per day limit California has adopted. If Kentucky imposed a limit that high, many people would have to drop their insurance. On the other hand, when you have too small a daily hospital limit, it may do more harm than good by lulling the insured into thinking he has all he needs. One company in Kentucky has 19,000 contracts ranging from \$5 to \$15 benefits a day. That company contemplates phasing out most of these policies with lower level benefits, and I'm in complete agreement.

Now back to the features of California's minimum benefits program:

A maximum "elimination period" of three days must be offered. A company cannot hold back benefits for more than the first three days before starting payment.

Surgical benefits must provide a minimum of \$300 for the most severe operation. Other operations must carry benefits reasonably related.

A \$10,000 minimum is set on major medical policies with the deductible portion not to exceed 10% of the minimum.

Now, if Kentucky were to pass a minimum of the amount set in California, it could have an undesirable effect, in that many people would not be able to afford insurance at all.

There is still another approach, somewhat similar to minimum benefits, which would require the insurers to return a stipulated per cent of dues or premium income back to the public in the form of benefits. This plan, too, has its shortcomings.

Consider the distribution of premium dollars in 1970. One company returned 58.8% of its premium dollars; another returned 94.6% of its premium dollars. The first company used 36.1% of premium income for expenses; the second only 6.6%. This variation in company operating methods is a factor to consider in a program which calls for return of a certain per cent of income in the form of benefits.

You asked us to touch on what percentage of our citizens are covered by some type of prepaid health plan, and their utilization of services.

First, some background data, if you will bear with me. The 1970 census shows Kentucky has a total population of 3,218,706. Nearly 3 million of these people fall in the under-65 age group, and we have these facts about them:

—78.7% of Kentuckians under 65 have hospital coverage. (National figure: 80%). Levels of Benefits range from the very best to inadequate.

—71.2% of Kentuckians under 65 have surgical coverage. (National figure: 87%).

37% of the TOTAL Kentucky population is enrolled in Blue Cross-Blue Shield.

In 1971, the health insurers and Blue Cross-Blue Shield paid out \$185,400,000 under hospital and surgical-medical policies. I predict the

1972 figure will exceed \$210 million. (The total paid out by all companies, nationwide, during 1971 was a staggering \$75 billion).

What is the average length of stay for short-term general hospitals? 7.2 days in Kentucky, says the American Hospital Association, with the national average running 8 days. Blue Cross statistics reveal a Kentucky average of only 6.26 days, at an average daily cost of \$79.72.

While the length of stay is pretty favorable in our State, we don't do as well on the number of in-patient admissions per 1000 insureds. In-patient admissions per 1000 insured Kentuckians (under age 65) average 131; the national average is only 120 admissions per 1000 persons insured.

As to those people who have no health insurance whatsoever, I can only conclude that they are either uninsurable or unable to afford the price of health coverage. Therefore, their rate of utilization would have to be less.

I've tried to get into a few problem areas which affect not only the insurance industry and the Insurance Department, but also our medical profession and the public generally. We are pleased that the KMA is interested in seeking solutions to some of these problems. For instance, I note that the new Kentucky Medical Association Foundation for Medical Care will be primarily concerned with the cost and quality of health care delivered in Kentucky. Through this Foundation, I believe doctors will have a chance to remedy some of our common problems in recognizing that the federal government is involved in the health picture. Federal involvement is evidenced by the passing of HR-1 (Public Law 92-603, a requirement that doctors maintain services of high quality with proper utilization, etc.). Dealing with federal intervention is a real challenge to all of us.

The Kentucky Insurance Department is very concerned about rising health care costs, which force insurance companies to charge more for new insurance and raise the price of existing coverage. People who have health insurance are using it more, and when it is utilized beyond what was expected, premiums must be increased accordingly.

You, as doctors, can exert a strong influence in the matter of unnecessary use of health



facilities. Statistical studies indicate many people are misusing hospital services generally, but probably the chief abuse is in short-stay cases. It is said that this is due to (1) unnecessary admissions and (2) delay in performing hospital procedures. No offense to anyone—I am just trying to point out areas where I think we must all work together for improvement.

In my opinion, the Insurance Department has come a long way (although we still have a long way to go) in rendering better service

to the public. In fact, we've been told Kentucky is one of the toughest states for getting sales material and health policies approved. Many other State Insurance Departments have requested our guidelines and regulations on health insurance. Even the "Feds" (Health, Education and Welfare) have asked for our advertising guidelines. As I said, though, we can't rest on our laurels in the Department. Even now we are thinking in terms of the additional legislation needed in order to properly regulate the health insurance business.

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### Have You Moved Recently?

Please send any change of address to *The Journal of the Kentucky Medical Association*, 3532 Ephraim McDowell Drive, Louisville, Kentucky 40205. We need your help in keeping our mailing list up to date. You are our best source of information.

### Notice To Contributors

Members of the Kentucky Medical Association reading papers before other organizations are asked to submit their papers to *The Journal* for consideration by the Editors for publication. Detailed instructions to contributors appear in the Scientific Section of *The Journal* under Manuscript Memos. Please forward any papers to:

Charles C. Smith, Jr., M.D., Scientific Editor  
The Journal of the Kentucky Medical Association  
3532 Ephraim McDowell Drive  
Louisville, Kentucky 40205



## EDITORIALS



### Diagnostic Admissions

ONE of the most irritating situations straining the relationships between patient, physician and third-party payor is the denial of hospital benefits because the admission was primarily for diagnostic studies.

It is also the least understood reason for denial of benefits—by both physician and patient—even though the exclusion is specifically spelled out in almost every contract issued by Kentucky Blue Cross. This confusion is sometimes compounded by those in a position to influence or enlighten their peers, either by the spoken or written word, when they fail to base their statements on the facts, or deliberately choose to ignore them. In a profession dedicated to truth, demanding preciseness in its pursuit of scientific accuracy, it is regrettable that its publications or forums are sometimes used to reflect an individual's personal prejudices or opinions, to the detriment of everyone concerned.

Blue Cross of Kentucky operates under a charter issued by the Commonwealth of Kentucky and is under the direct supervision of the Department of Insurance. It is legally obligated to pay all of the benefits to which the subscriber is entitled under a contract and for which he has paid specified dues (premiums). By the same token, Blue Cross is not permitted by law to pay benefits for services which are not included in, or are specifically excluded from, the contract.

Such payment, furthermore, would be unfair to the other subscribers in the individual's Group since they would, in effect, be subsidizing payment of the non-covered benefits and be contributing to an increase in their own dues for the following year.

As is true in the administration of all claims for third-party payment, the decision to pay or deny the claim must be based on a review of

the available medical information as applied to the individual patient's contract coverage.

In Kentucky Blue Cross, the diagnostic exclusion is applied reluctantly, but inevitably, in a small percentage of the claims submitted. It is never applied when the medical record indicates that the condition of the patient required hospitalization or when the diagnostic studies, in themselves, dictate the hospital setting.

But, when the record states that the patient is "not acutely ill"; the x-ray and laboratory studies were of a nature that could be, and frequently are, performed in a physician's office or laboratory; and when there is no evidence of definitive therapy having been prescribed, then it is inevitable that the claim will be rejected as an admission "primarily for diagnostic studies."

That this determination frequently works an undue financial hardship on the patient is unquestioned. That the patient will be critical of the physician in this situation is, likewise, undoubtedly true, for it is the physician who ordered the admission. Both seem to want to paint Blue Cross as the villain—simply because it won't pay for something the patient didn't buy and which is specifically excluded in the contract.

It is incumbent upon the physician, then, to be aware of the coverage his patient has purchased—information that is readily available from the code numbers on the Blue Cross and Blue Shield card. It is also his obligation to warn his patient that Blue Cross, in most instances, does not pay for hospitalization for "tests", "a check-up" or "re-evaluation" or just because it is more convenient (for patient and physician) to have those x-rays in the hospital.

The spiralling costs of health care are not controlled by unnecessary hospitalizations.

HBA



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## 1973 FALL CONFERENCE

## KENTUCKY THORACIC SOCIETY

**October 12-13**

**Rowntowner Motor Inn — Fort Mitchell, Kentucky — I-75 and Buttermilk Pike**

### FRIDAY, OCTOBER 12

#### SCIENTIFIC SESSION I

##### "Adult Respiratory Distress Syndrome"

*Moderators*

*1-2:30 p.m.—Richard Neiberger, A.R.I.T.*

*3-4:15 p.m.—David R. McCurdy, A.R.I.T.*

- 1:00 p.m.** "A Case Report"  
*Judah L. Skolnick, M.D.*  
*Pulmonary Disease Specialist*  
*Louisville*
- 1:15 p.m.** "Etiology and Pathogenesis"  
*Lester R. Bryant, M.D.*  
*Professor of Surgery*  
*University of Kentucky School of Medicine*  
*Lexington*
- 2:00 p.m.** "Hardware"  
*Robert J. Floro, A.R.I.T.*  
*Director of Respiratory Therapy Division*  
*University of Kentucky School of Medicine*  
*Lexington*
- 2:30 p.m.** Coffee Break
- 3:00 p.m.** "PEEP"  
*Leonard D. Hudson, M.D.*  
*Chest Section Chief*  
*Harborview Medical Center*  
*Seattle*
- 4:00 p.m.** "Nursing Problems"  
*Carolyn A. Voelker, B.S.N.*  
*Clinical Instructor*  
*Intensive and Coronary Care*  
*Jewish Hospital, Louisville*
- 4:15 p.m.** Panel Discussion
- 5:00 p.m.** Adjournment

### SATURDAY, OCTOBER 13

#### SCIENTIFIC SESSION II

*Moderators*

*8:30 a.m.-1:30 p.m.—Thomas M. Jarboe, M.D.*

- 8:30 a.m.** "New Anti-Fungal Agents"  
*Robert W. Powell, M.D.*  
*Pulmonary Disease Specialist*  
*Louisville*
- 9:00 a.m.** "Pulmonary Function Screening"  
*William H. Anderson, M.D.*  
*Professor of Medicine*  
*University of Louisville School of Medicine*
- 9:30 a.m.** "Reversible Airway Disease—Asthma"  
*Leonard D. Hudson, M.D.*  
*Chest Section Chief*  
*Harborview Medical Center*  
*Seattle*
- 10:30 a.m.** Coffee and Roll Break
- 11:00 a.m.** "The Lung as a Biosynthetic & Secretory Organ"  
*Donald J. Massaro, M.D.*  
*Professor of Medicine*  
*George Washington University*  
*Washington, D.C.*
- 12:00 noon** "Stump the Experts"—Case Presentations from Audience  
Panel:  
*Edward N. Maxwell, M.D., Radiologist,*  
*Louisville*  
*Richard B. McElvein, M.D., Thoracic Surgeon,*  
*Lexington*  
*David Nicholson, M.D., Professor of Medicine,*  
*University of Kentucky School of Medicine*
- 1:30 p.m.** Adjournment



NOTE: All health professionals are invited to both sessions.  
Scientific Session I—October 12 is primarily for paramedical personnel  
Scientific Session II—October 13 is primarily for physicians





## ORGANIZATION SECTION



### DHEW Holds PSRO Hearing At KMA Headquarters

On August 30, 1973, a public hearing on area designation for Professional Standards Review Organizations for the state of Kentucky was held at the KMA Headquarters building. The meeting was sponsored by the Region IV Health, Education and Welfare Office.

In addition to members of the KMA Board of Trustees and KFMC Board of Directors, representatives from approximately 15 allied organizations were present. The meeting was conducted by George A. Reich, M.D., a Region IV official from Atlanta.

Members of the Region IV staff provided background information on the legislative history of the PSRO section of Public Law 92-603, designation for PSRO areas, and made themselves available to answer general questions. The floor was then opened for presentation by any organization wishing to suggest a PSRO implementation plan.

David A. Hull, M.D., KFMC President, briefly related the major points of the Foundation proposal for PSRO. William P. Vonderhaar, M.D., President of the Jefferson County Medical Society, related his society's interest in functioning as a separate PSRO area in the event that the entire state was not designated as a single area. He did, however, confirm support of the single area concept. No other plans were presented.

All attending were asked to indicate their preference for PSRO operations by completing a form which listed HEW-suggested area alternatives. Observers noted that no dissent was voiced to the KFMC plan.

According to Doctor Reich, PSRO areas would be designated by the Secretary of DHEW effective January 1, 1974, and that the purpose of the hearing was to gather information from in-state groups to assist the Secretary's decision.

### PBS Stations to Broadcast Fall Medical Series

"The Killers"—five medical documentaries—will be presented over 237 interconnected Public Broadcasting Service stations across the country each month starting November 19.

Designed to inform the public about methods of prevention, early detection and treatment of the five medical conditions that accounted for 75.7% of deaths in the United States last year, the programs will deal with **Heart Disease** (November 19), **Inborn Genetic Defects** (December 17), **Pulmonary Disease**

(January 14), **Trauma** (February 11) and **Cancer** (March 11).

A medical advisory board of 23 representatives of health and medical professions has prepared the programs which are an hour and a half in length. Local listings will provide the times of the programs in the various PBS areas.

### ACP To Hold Regional Mtg. In Louisville Nov. 17

Specialists in internal medicine and related medical fields will hold a one-day scientific meeting November 17 at the Louisville Stouffer's Inn, according to George W. Pedigo, Jr., M.D., Louisville, Kentucky representative to the American College of Physicians.

The Kentucky regional meeting of the ACP is designed to bring physicians up-to-date on late developments in the field of internal medicine. It is one of 35 such sessions held each year throughout the United States and Canada by the 21,000 member medical specialty society.

Further information on the meeting can be obtained by contacting Doctor Pedigo at 670 Medical Towers, Louisville, Kentucky 40202.

### Continuing Education Programs On TV To Be Listed

Beginning with this issue, *The Journal* will begin publishing on the Postgraduate Opportunities Page the schedules of upcoming medical education programs distributed by the Network for Continuing Medical Education (NCME).

NCME is an educational television service for some 100,000 physicians at over 650 hospitals and medical centers across the country. Kentucky hospitals served by NCME are as follows:

Hardin Memorial Hospital, Elizabethtown  
Hopkins County Hospital & Trover Clinic, Madisonville  
Jennie Stuart Memorial Hospital, Hopkinsville  
King's Daughters' Hospital, Ashland  
Owensboro-Daviess County Hospital, Owensboro  
St. Claire Medical Center, Morehead  
St. Elizabeth Hospital, Covington  
University of Kentucky Medical Center, Lexington  
St. Anthony Hospital, Louisville

These programs, predominantly clinical in nature, are approved for accreditation by the American Medical Association and the American Academy of Family Physicians.

Supported by Roche Laboratories, NCME provides programs without charge in videotape formats. As a supplement to its regular service, the NCME Master Library makes some 600 programs available on a rental or purchase basis. For further information, contact NCME, 15 Columbus Circle, New York, N.Y. 10023.



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**Contraindications:** Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

**Warnings:** Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia ( $> 5.4$  mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently — both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides

are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

**Precautions:** Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

**Adverse Reactions:** Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

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**Actions**—Ovulen and Demulen act to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen and Demulen depress the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

**Special note**—Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

**Indication**—Ovulen and Demulen are indicated for oral contraception.

**Contraindications**—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

**Warnings**—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain<sup>1-3</sup> leading to this conclusion, and one<sup>4</sup> in the United States. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll<sup>3</sup> was about sevenfold, while Sartwell and associates<sup>4</sup> in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as non-users. The American study also indicated that the risk did not persist after discontinuation of administration and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

**Precautions**—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of

fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen or Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen or Demulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen or Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

**Adverse reactions observed in patients receiving oral contraceptives**—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T<sub>3</sub> uptake values; metyrapone test and pregnanediol determination.

**References:** 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. 13:267-279 (May) 1967. 2. Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193-199 (April 27) 1968. 3. Vessey, M. P., and Doll, R. Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. 2:651-657 (June 14) 1969. 4. Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidem. 90:365-380 (Nov.) 1969.

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**Indication**—Enovid-E is indicated for oral contraception. The Special Note, Contraindications, Warnings, Precautions and Adverse Reactions listed above for Ovulen and Demulen are applicable to Enovid-E and should be observed when prescribing Enovid-E.

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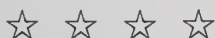
## In Memoriam

**CLIFTON D. LAMM, M.D.**  
Bloomfield  
1932-1973

Clifton D. Lamm, M.D., 40, died on August 1, 1973, as a result of a plane crash. Doctor Lamm was a 1962 graduate of the University of Tennessee College of Medicine. A family physician, he had been a member of the Nelson County Medical Society, the Kentucky and American Medical Associations.

**ELTON R. HOUSE, M.D.**  
Henderson  
1935-1973

Elton Rudolph House, M.D., 38, died August 26, 1973, as a result of a drowning accident. A 1961 graduate of the Howard University Medical School, Doctor House, a surgeon, belonged to the Henderson County Medical Society, the Kentucky and American Medical Associations.



**Details of the 1973**

**KMA Annual Meeting**

will be published in the

**NOVEMBER**

**Journal of Kentucky Medical Association**



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# Recommendations<sup>†</sup> on Combination Live Virus Vaccines

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## American Academy of Pediatrics

### Committee on Infectious Diseases

In the September 15, 1971 AAP Newsletter sent to Academy members, the Committee on Infectious Diseases of the American Academy of Pediatrics stated its recommendations on the use of combination live virus vaccines. After a careful review of available data, the committee concluded that:

- "This information indicates that the products are both safe and effective when used as directed."
- The vaccine "...can, therefore, be recommended with the obvious advantages of reduction in the number of injections for any given child and a concomitant decrease in the required visits to a physician's office or clinic."

<sup>†</sup>For complete text of both recommendations see your MSD representative or write to Professional Service Dept., Merck Sharp & Dohme, West Point, Pa. 19486.

## United States Public Health Service

### Advisory Committee on Immunization Practices

In the April 24, 1971 issue of *Morbidity and Mortality Weekly Report*, the Advisory Committee on Immunization Practices of the United States Public Health Service presented recommendations on the use of combination live virus vaccines. The committee stated that:

- "Data indicate that antibody response to each component of these combination vaccines is comparable with antibody response to the individual vaccines given separately."
- "There is no evidence that adverse reactions to the combined products occur more frequently or are more severe than known reactions to the individual vaccines (see pertinent ACIP recommendations)."
- "The obvious convenience of giving already selected antigens in combined form should encourage consideration of using these product when appropriate."





# **M-M-R<sup>\*</sup>**

## **(MEASLES, MUMPS AND RUBELLA VIRUS VACCINE, LIVE | MSD)**

Single-dose vials

M-M-R, given in a single injection, fits easily into your routine immunization program for well babies. Given at age 12 months, M-M-R provides for vaccination early in life against measles, mumps, and rubella.

### **MSD suggested immunization schedule for well babies**

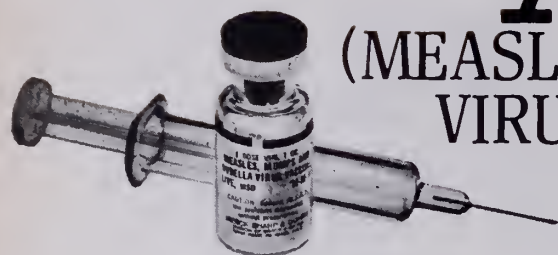
<b>Age</b>	<b>Vaccine(s)</b>
2 months	DPT (diphtheria-pertussis-tetanus) Oral poliomyelitis vaccine (triple)
3 months	DPT <sup>1</sup>
4 months	DPT Oral poliomyelitis vaccine (triple)
6 months	Oral poliomyelitis vaccine (triple)
<b>12 MONTHS</b>	<b>M-M-R (MEASLES, MUMPS AND RUBELLA VIRUS VACCINE, LIVE, MSD)</b>

1. This vaccination may be given at 3 months, 5 months, or at 6 months, depending on your preference or on the condition of the child.

Since vaccination with a live virus vaccine may depress the results of a tuberculin test for four weeks or longer, the test and the vaccine should not be given during the same office visit.

\*Trademark of Merck & Co., Inc.

**For a brief summary of prescribing information, please see following page.**



# M-M-R

## (MEASLES, MUMPS AND RUBELLA VIRUS VACCINE, LIVE | MSD)

Single-dose vials

No untoward reactions peculiar to the combination vaccine (M-M-R) have been reported.

Moderate fever (101-102.9 F) occurs occasionally. High fever (over 103 F) occurs less commonly. On rare occasions, children who develop fever may exhibit febrile convulsions. Rash (usually minimal and without generalized distribution) may occur infrequently.

Since clinical experience with measles, mumps, and rubella virus vaccines given individually indicates that very rarely encephalitis and other nervous system reactions have occurred, such reactions may also occur with M-M-R. A cause and effect relationship, however,

has not been established.

Excretion of the live attenuated rubella virus from the throat has occurred in the majority of susceptible individuals administered the rubella vaccine. There is no definitive evidence to indicate that such virus is contagious to susceptible persons who are in contact with the vaccinated individuals. Consequently, transmission, while accepted as a theoretical possibility, has not been regarded as a significant risk.

Must not be given to women who are pregnant or who might become pregnant within three months following vaccination.

**Contraindications:** Pregnancy or possibility of pregnancy within three months following vaccination; infants less than one year old; sensitivity to chicken or duck, chicken or duck eggs or feathers, or neomycin; any febrile respiratory illness or other active febrile infection; active untreated tuberculosis; therapy with ACTH, corticosteroids, irradiation, alkylating agents, or antimetabolites; blood dyscrasias, leukemia, lymphomas of any type, or other malignant neoplasms affecting the bone marrow or lymphatic systems; gamma globulin deficiency, i.e., agammaglobulinemia, hypogammaglobulinemia, and dysgammaglobulinemia. **Precautions:** Administer subcutaneously; do not give intravenously. Epinephrine should be available for immediate use should an anaphylactoid reaction occur. Should not be given less than one month before or after immunization with other live virus vaccines; vaccination should be deferred for at least six weeks following blood transfusions or administration of more than 0.02 cc immune serum globulin (human) per pound of body weight, or human plasma.

Due caution should be employed in children with a history of febrile convulsions, cerebral injury, or any other condition in which stress due to fever should be avoided. The physician should be alert to the temperature elevation which may occur after vaccination.

Excretion of the live attenuated rubella virus from the throat has occurred in the majority of susceptible individuals administered the rubella vaccine. There is no definitive evidence to indicate that such virus is contagious to susceptible persons who are in contact with the vaccinated individuals. Consequently, transmission, while accepted as a theoretical possibility, has not been regarded as a significant risk.

Attenuated live virus measles and mumps vaccines, given separately, may temporarily depress tuberculin skin sensitivity; therefore, if a tuberculin test is to be done, it should be scheduled before vaccination, to avoid the possibility of a false negative response.

Before reconstitution, refrigerate vaccine at 2-8 C (35.6-46.4 F) and protect from light. Use only diluent supplied to reconstitute vaccine. If not used immediately, return reconstituted vaccine to refrigerator at 2-8 C (35.6-46.4 F), and discard after eight hours.

**Adverse Reactions:** Fever, rash; mild local reactions such as erythema, induration, tenderness, regional lymphadenopathy; parotitis; thrombocytopenia and purpura; allergic reactions such as urticaria; arthritis, arthralgia, and polyneuritis.

Occasionally, moderate fever (101-102.9 F); less commonly, high fever (above 103 F); rarely, febrile convulsions.

Encephalitis and other nervous system reactions that have occurred very rarely with the individual vaccines may also occur with the combined vaccine.

Transient arthritis, arthralgia, and polyneuritis are features of natural rubella and vary in frequency and severity with age and sex, being greatest in adult females and least in prepubertal children. Such reactions have been reported with live attenuated rubella virus vaccines. Symptoms relating to joints (pain, swelling, stiffness, etc.) and to peripheral nerves (pain, numbness, tingling, etc.) occurring within approximately two months after immunization should be considered as possibly vaccine related. Symptoms have generally been mild and of no more than three days' duration. The incidence in prepubertal children would appear to be less than 1% for reactions that would interfere with normal activity or necessitate medical attention.

**How Supplied:** Single-dose vials of lyophilized vaccine, containing when reconstituted not less than 1,000 TCID<sub>50</sub> (tissue culture infectious doses) of measles virus vaccine, live, attenuated, 5,000 TCID<sub>50</sub> of mumps virus vaccine, live, and 1,000 TCID<sub>50</sub> of rubella virus vaccine, live, expressed in terms of the assigned titer of the NIH Reference Measles, Mumps, and Rubella Viruses, and approximately 25 mcg neomycin, with a disposable syringe containing diluent and fitted with a 25-gauge, 5/8" needle. Also in boxes of 10 single-dose vials nested in a pop-out tray with a separate box of 10 diluent-containing syringes.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

**MSD**  
**MERCK**  
**SHARP &**  
**DOHME**





# Placidyl® (ETHCHLORVYNOL) Brief Summary

**Indications**—Placidyl (ethchlorvynol) is indicated for short-term hypnotic therapy in the management of insomnia.

**Contraindications**—Drug hypersensitivity and porphyria.

**Warnings**—Not recommended during the first and third trimester of pregnancy. Caution patients with possible combined exaggerated effects with alcohol, barbiturates, tranquilizers or other CNS depressants. Exaggerated effects might result in impairment of vision, paralysis of accommodation and central hypnosis. Caution patients concerning operation of a motor vehicle, operating machinery, or hazardous operations requiring alertness after taking the drug. ADMINISTER WITH CAUTION TO PATIENTS WITH SUICIDAL TENDENCIES AND DO NOT PRESCRIBE LARGE QUANTITIES OF THE DRUG. Adjustment of the dosage of oral anticoagulants might be necessary when beginning ethchlorvynol therapy, during therapy, or after stopping therapy. This drug is not recommended for use in children. PLACIDYL HAS THE POTENTIAL FOR DEVELOPMENT OF PSYCHOLOGICAL AND PHYSICAL DEPENDENCE. INSTANCES OF SEVERE WITHDRAWAL SYMPTOMS, INCLUDING CONVULSIONS AND DELIRIUM CLINICALLY SIMILAR TO THOSE SEEN WITH BARBITURATES, HAVE BEEN REPORTED IN PATIENTS TAKING USUAL DOSES AS LOW AS 1000 MG. PER DAY FOR A PERIOD OF TIME WHEN THE DRUG WAS SUDDENLY DISCONTINUED. PROLONGED ADMINISTRATION OF THE DRUG IS NOT RECOMMENDED. Addiction-prone patients or those who are likely to increase dosages of the drug on their own initiative should be observed for evidence of withdrawal or symptoms which may indicate possible withdrawal or abstinence symptoms. Signs and symptoms associated with withdrawal and abstinence include unusual anxiety, tremor, ataxia, impairment of speech, memory loss, perceptual distortions, irritability, agitation and delirium. Other ill-defined signs and symptoms, not necessarily due to withdrawal and abstinence, may include anorexia, nausea or vomiting, weakness, dizziness, sweating, muscle twitching and weight loss. Abrupt discontinuance of Placidyl following prolonged overdosage may result in convulsions and delirium.

**Adverse Effects**—Toxic amblyopia has been reported with long-term continuous use of ethchlorvynol. Permanent visual defects have been observed, although amblyopia has improved after discontinuance of the drug. Drug dosage should be limited in elderly and debilitated patients to the smallest effective amount. If pain is present, this drug should only be given if insomnia persists after treatment with analgesics. Caution is advised in prescribing the drug for patients who are treated with either MAO inhibitors or anti-anxiety agents. Transient delirium has been reported with combination of Placidyl and amitriptyline. Dosage should be reduced if prescribed for patients receiving MAO inhibitors or antidepressants. Caution should be exercised in patients with impaired hepatic or renal function. Patients respond unpredictably to barbiturates or alcohol who exhibit excitement and release of inhibition in association with such agents, may also respond in this way to Placidyl. Rarely, patients may have symptoms suggestive of an unusual sensitivity to the drug; such as prolonged hypnosis, muscular weakness, excitement, hysteria, hypotension without marked hypotension. Transient dizziness or ataxia may occur.

**Side Reactions**—Hypotension, nausea or vomiting, gastric upset, aftertaste, blurring of vision, numbness, facial numbness, and allergic reaction by urticaria have been reported following oral administration. Mild "hangover" and symptoms of mild excitation have occurred in some patients. There have been rare reports of cholestatic jaundice occurring in patients taking ethchlorvynol. Cases of thrombocytopenia have been reported in patients receiving ethchlorvynol. 306433

## Give us his nights.

Prescribe Placidyl. Chances are, we'll give him a good night's sleep.

Insomnia often accompanies a cardiovascular episode. How many nights does he lie awake, awaiting exactly what he fears most . . . another stroke, another heart attack? He doesn't need fear. He needs sleep.

When sleep is synonymous with therapy, remember . . . Placidyl is synonymous with sleep. It has been for over 17 years.

If time is the criterion to inspire your confidence . . . you can rest assured with Placidyl.

Prescribed by physicians for over 17 years.

**Placidyl®** 

(ETHCHLORVYNOL CAPSULES, 500 or 750 mg.)



# Gantanol® (sulfamethoxazole) and the

## 0.1 M.I.C.

for three hours

Similar elongations occur regardless of antibacterial used.

## 1.0 M.I.C.

for three hours

Similar midcell defects seen with increased antibacterial concentrations.

## 10 M.I.C.

for three hours

Similar spheroplast-like forms appear with high concentrations of the antibacterials.



E. coli + sulfamethoxazole



E. coli + tetracycline

## The Scanning Electron Microscope (SEM) reveals the effect

**The *in vitro* experiment.** These SEM photomicrographs were taken as part of a study exploring the effects of various antibacterials with different modes of action on the surface morphology of bacteria. The scanning electron microscope was used because of its ability to show three-dimensional views of organisms, enabling better definition and appreciation of surface morphology.

For this portion of the experiment, *E. coli* were exposed to the following agents: sulfamethoxazole, a chemical drug which acts by interference with para-

aminobenzoic acid utilization; tetracycline, which interferes with intracellular protein synthesis; and cephalothin and ampicillin, which are cell-wall-active drugs.

Strains of *E. coli*, each susceptible to the respective antibacterials, were exposed for 15, 30, 60, 120 and 180 minutes and 18 hours to several concentrations of each agent.

Following the 180-minute or three-hour exposures to the antibacterials at 0.1 M.I.C., 1.0 M.I.C. and 10 M.I.C., photoscans of the *E. coli* were taken. As shown above, regardless of the antibacterial agent used or its mode of action, the changes in surface morphology were remarkably similar... elongation at low drug concentrations, midcell defects at higher



# Three-Dimensional World of SEM



E. coli + cephalothin



E. coli + ampicillin

## of certain antibacterials on bacterial surface morphology

concentrations and ultimate progression to spheroid-like forms.<sup>1</sup>

**The interpretation.** "At present, the significance of these observations in clinical infection must be considered with caution, but it is hoped that these data will stimulate a reevaluation of present concepts of the nature and role of morphological variants of bacteria exposed to a variety of antibacterial factors."<sup>2</sup>

**It should be noted that this information represents only *in vitro* research. No clinical significance can be drawn from this study concerning the effective-**

**ness of any of the agents discussed, as it is not possible to extrapolate *in vitro* data to humans. This information is presented to demonstrate the continuing research activities in the area of antibacterials, particularly modes of action and surface morphology.**

<sup>1</sup>Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

<sup>2</sup>*Antimicrob. Agents Chemother.*, 1:164, 1972.

See next two pages for product information.

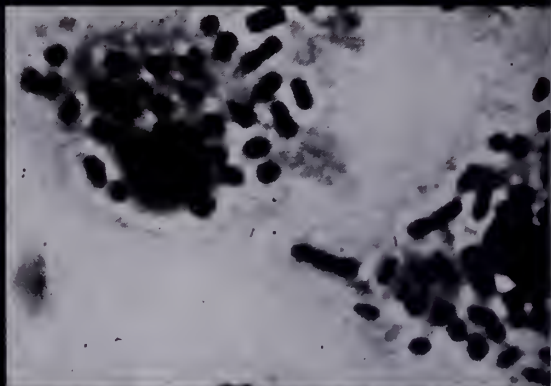


Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110

# Observations from



*E. coli*—Fluorescent stain



*Klebsiella* sp.—Stain to define capsular envelope

## ■ Effective control of primary susceptible bacterial offenders

Gantanol® (sulfamethoxazole) is effective against susceptible strains of *E. coli*, the most common cause of urinary tract infections. It is also highly effective against other susceptible gram-negative and gram-positive organisms, usually *Klebsiella-Aerobacter*, *Staph. aureus* and *Proteus mirabilis*.

## ■ Prompt antibacterial blood and urine levels—in from 2 to 3 hours

Antibacterial levels of Gantanol usually appear in blood and urine in from 2 to 3 hours after the initial 2-Gm adult dose. This rapid initiation of effective antibacterial activity enables prompt treatment of certain nonobstructed urinary tract infections and may also help avert possible sequelae.

## ■ Around-the-clock coverage for 14 days

Mounting evidence in current medical literature suggests a minimum of 14 days' continuous therapy for certain urinary tract infections.\* Following the initial 2-Gm adult dosage of Gantanol each 1-Gm dose provides up to 12 hours of antibacterial activity during the treatment period. When urinary tract infection is more severe, *t.i.d.* (q. 8 h.) dosage schedule may be required. Both regimens provide around-the-clock therapy, important because normal urinary retention during sleep tends to favor bacterial proliferation. It is also convenient for patients not to have to take middle-of-the-night medication.

## ■ Also effective in certain nonobstructed chronic and recurrent urinary tract infection

Nonobstructed urinary tract infections, such as cystitis or pyelonephritis—chronic and/or recurrent—develop more commonly in the elderly and debilitated, and response to Gantanol is often highly satisfactory.

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note:** Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

**Contraindications:** Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

**Warnings:** Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-

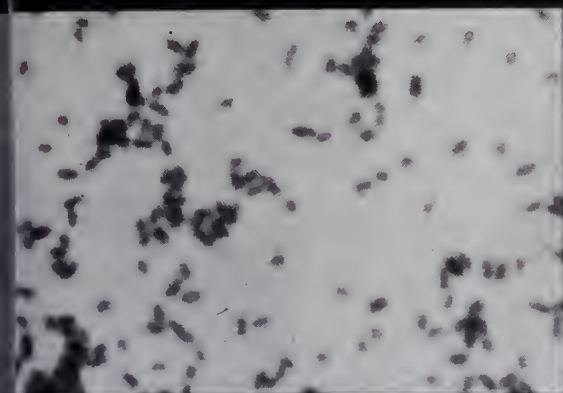
hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

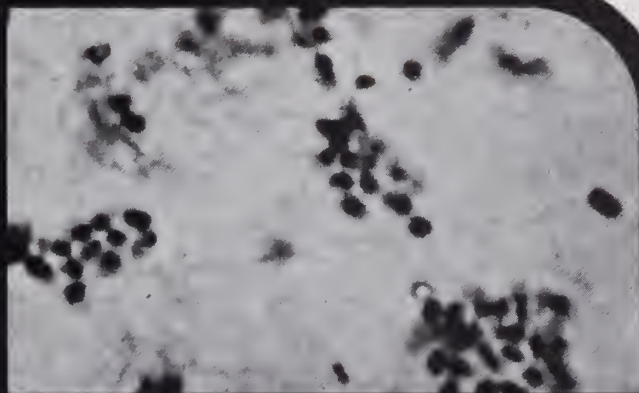
**Adverse Reactions:** Blood dyscrasias (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglo-



# clinical practice



*Enterobacter* sp.—Gram stain showing characteristic gram-negative rod



*Proteus mirabilis*—Flagella stain

## ■ Your option: tablets or suspension

Gantanol Tablets or the pleasant-tasting, cherry-flavored Suspension can provide dependable antibacterial activity to control susceptible nonobstructed cystitis and pyelonephritis. Symptomatic improvement usually may be expected to begin within 24 to 48 hours. Usual precautions with sulfonamide therapy should be observed, including adequate fluid intake. Gantanol is generally well tolerated, with relative freedom from complications; the most common side effects are nausea, vomiting and diarrhea. Frequent c.b.c.'s and urinalyses with microscopic examination are recommended during therapy.

\*Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

n nonobstructed cystitis due to susceptible organisms

## Gantanol<sup>®</sup> B.I.D. (sulfamethoxazole) Basic therapy

nemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *VS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, furozides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

**Dosage:** Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

*Usual adult dosage:* 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

*Usual child's dosage:* 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

**Supplied:** Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

ROCHE

Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110

# Continuing Educational Opportunities

From The

## KMA Postgraduate Medical Education Office

### IN KENTUCKY

#### OCTOBER

- 26-27 Seminar\*\*, "Clinical Aspects of Pain," Department of Anesthesiology, University of Louisville School of Medicine, Advance Registration Requested (\$25 for physicians); Health Sciences Center Auditorium, Louisville
- 29-30 Annual Yandell Lecture, Health Sciences Center, University of Louisville, Speaker—D. E. Szilagyi, M.D., Detroit.

#### NOVEMBER

- 7 Ninth Annual Louisville Pediatric Lecture, by Melvin Grumbach, M.D., University of Louisville School of Medicine, Health Sciences Center Auditorium, Louisville
- 8-9 Newborn Symposium, "Congenital Defects — Management and Outcome", Department of Pediatrics, University of Louisville School of Medicine, Health Sciences Center Auditorium, Louisville
- 10-11 Scientific Seminar, Kentucky Academy of Family Physicians, Jenny Wiley State Park, Prestonsburg
- 17 Kentucky Regional Meeting, American College of Physicians, Stouffer's Inn, Louisville

### IN SURROUNDING STATES

#### OCTOBER

- 19-20 Colloquium, "The Range of Normal in Human Behavior," Shriners Burn Institute Auditorium, University of Cincinnati Medical Center, Cincinnati
- 21-25 Annual Scientific Assembly, American College of Chest Physicians, Four Seasons Hotel, Toronto, Ontario, Canada

#### NOVEMBER

- 7-8 Postgraduate course, "Pediatric Endocrinology," Cleveland Clinic Foundation, Cleveland
- 14-15 Postgraduate course, "Gastroenterology for the Practicing Physician," Cleveland Clinic Foundation, Cleveland

- 14-17 Seminar on "Life-Saving Measures for the Critically Injured," sponsored by the American College of Surgeons and the University of Tennessee College of Medicine, Shrier Auditorium, Memphis

#### DECEMBER

- 1-5 Clinical Convention, American Medical Association, Anaheim, California

### SCHEDULE OF UPCOMING NCME PROGRAMS

*(See story in Organization Section)*

#### October 22-November 4

LAPAROSCOPIC STERILIZATION, with Thomas F. Dillon, M.D., Professor of Obstetrics and Gynecology, Columbia University College of Physicians and Surgeons, New York City.

TRANSIENT ISCHEMIC ATTACK—THE HISTORY, with Clark H. Millikan, M.D., Professor of Neurology, The Mayo Clinic, Rochester, Minnesota

TRANSIENT ISCHEMIC ATTACK—THE PHYSICAL, with Clark H. Millikan, M.D., Professor of Neurology, The Mayo Clinic, Rochester, Minnesota.

#### November 5-November 18

RADIOLOGIC MANAGEMENT OF EARLY CANCER OF THE LARYNX, with Alexander D. Crosett, Jr., M.D., Director, Division of Radiation Therapy and Nuclear Medicine at Overlook Hospital, Summit, New Jersey; and Charles E. Langgaard, M.D., Attending Otolaryngologist, Summit Medical Group, Summit, New Jersey.

WHAT CAROTID ARTERIOGRAPHY CAN TELL YOU, with Michael D. F. Deck, M.D., Associate Professor of Radiology at Cornell University Medical Center in New York.

NATURAL CHILDBIRTH, with Alfred Tanz, M.D., Assistant Clinical Professor, New York Medical College, New York.



# Healing nicely, but it still **HURTS**

**HERE**

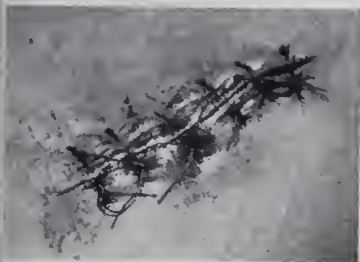
Burns



When parenteral analgesia is no longer required, Empirin Compound with Codeine usually provides the relief needed.

**HERE**

Sutures



Empirin Compound with Codeine is effective for visceral as well as soft tissue pain—provides an antitussive bonus in addition to its prompt, predictable analgesia.

**prescribing convenience:** up to 5 refills in 6 months, at your discretion (unless restricted by state law); by telephone order in many states.

Empirin Compound with Codeine **No. 3**, codeine phosphate\* 32.4 mg. (gr. ½); **No. 4**, codeine phosphate\* 64.8 mg. (gr. 1). \*Warning—may be habit-forming. Each tablet also contains: aspirin gr. 3½, phenacetin gr. 2½, caffeine gr. ½.



Wellcome

Burroughs Wellcome Co.  
Research Triangle Park  
North Carolina 27709



**HERE**

Nasal fracture

# EMPIRIN<sup>®</sup> COMPOUND c CODEINE

#3, codeine phosphate\* (32.4 mg.) gr. ½  
#4, codeine phosphate\* (64.8 mg.) gr. 1

# Pinworm therapy is often a family affair



**Contraindications:** History of hypersensitivity to thiabendazole.

**Warnings:** If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.

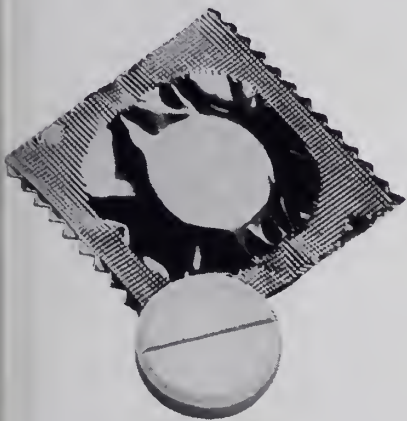
**Precautions:** Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction,

patients should be carefully monitored.

**Adverse Reactions:** Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of live *Ascaris* in the mouth and nose. Hypersensitivity reactions



# Chewable Tablets<sup>500 mg</sup> Mintezol<sup>®</sup> (THIABENDAZOLE | MSD)



so easy to take  
everyone in the family  
can keep to the  
regimen you prescribe

include: fever, facial flush, chills, conjunctival injection, angioedema, anaphylaxis, skin rashes, erythema multiforme (including Stevens-Johnson syndrome), and lymphadenopathy.

**Supplied:** Chewable tablets, containing 500 mg thiabendazole, in boxes of 36, strip packaged, individually foil wrapped; Suspension, containing 500 mg thiabendazole per 5 ml, in bottles of 120 ml.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

## INDICATION | DOSAGE SCHEDULE

MINTEZOL<sup>®</sup> (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infections. Dosages are weight related. For your convenience, the information in the weight-dose chart below is included in the full prescribing information and in the 1973 edition of PDR.

*The recommended maximum daily dose of MINTEZOL is 3 g (6 tablets).*

MINTEZOL should be given after meals if possible. Dietary restriction, complementary medications, and cleansing enemas are not needed.

The usual dosage schedule for all conditions is two doses per day. The size of the dose is determined by the patient's weight.

Weight-dose chart:

WEIGHT (lb)	EACH DOSE (g)	TABLETS
25	0.25	1/2
50	0.5	1
75	0.75	1 1/2
100	1.0	2
125	1.25	2 1/2
150 & over	1.5	3

The regimen for each indication follows:

INDICATION	REGIMEN	COMMENTS
Pinworm disease	Two doses per day for 1 day. Repeat in 7 days.  This regimen is designed to reduce the risk of reinfection.	If this is not practical, give 2 doses per day for 2 successive days.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses per day for 2 successive days.	A single dose of 20 mg/lb or 50 mg/kg may be employed as an alternative schedule, but a higher incidence of side effects should be expected.
Creeping eruption	Two doses per day for 2 successive days.	If active lesions are still present 2 days after completion of therapy, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses per day for 2 to 4 successive days according to the response of the patient.	The optimal dosage for the treatment of trichinosis has not been established.

\*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.

With the means at hand to drastically reduce the number of deaths each year from uterine cancer, we have embarked on a nationwide, life-saving program. Its goal is a Pap test by 1976 for every woman 20 years or older to whom the test is applicable, and for younger women at risk. An ambitious program, doctor, and one which can only be realized with your help.

We are faced with these facts: only 53% of women over

20 have ever had a Pap test; only 20% get a Pap test periodically; each year about 43,000 new cases are diagnosed; this year 12,000 women in this country will die of uterine cancer. And about 75% of these deaths will result from cervical cancer — as you know, almost 100% curable when diagnosed early and treated promptly.

We hope to reach women in the target group not only with the message about the *vital*

Pap test, but also with the urgency of including it in the *regular* health checkup. The mortality rate from uterine cancer could thus be dramatically curtailed.

Clearly action is called for. Coordinated action — involving the doctor, the patient, the American Cancer Society — a partnership for life.

# a partnership for life





# when manhood ebbs...

due to testicular deficiency

## Halotestin® 5 mg tablets

fluoxymesterone, Upjohn oral hormone replacement

*"When impotence is the principal complaint of a patient, it is usually the result of an emotional disturbance, in which case androgen therapy is valueless and at times may add to the psychic trauma."\**

**Halotestin® Tablets—2, 5 and 10 mg**  
(fluoxymesterone Tablets, U.S.P., Upjohn)

**Indications in the male:** Primary indication in the male is replacement therapy. Prevents the development of atrophic changes in the accessory male sex organs following castration:

1. Primary eunuchoidism and eunuchism. 2. Male climacteric symptoms when these are secondary to androgen deficiency. 3. Those symptoms of panhypopituitarism related to hypogonadism. 4. Impotence due to androgen deficiency. 5. Delayed puberty, provided it has been definitely established as such, and it is not just a familial trait.

**In the female:** 1. Prevention of postpartum breast manifestations of pain and engorgement. 2. Palliation of androgen-responsive

advanced, inoperable female breast cancer in women who are more than 1, but less than 5 years post-menopausal or who have been proven to have a hormone-dependent tumor, as shown by previous beneficial response to castration.

**Contraindications:** Carcinoma of the male breast. Carcinoma, known or suspected, of the prostate. Cardiac, hepatic or renal decompensation. Hypercalcemia. Liver function impairment. Prepubertal males. Pregnancy.

**Warnings:** Hypercalcemia may occur in immobilized patients, and in patients with breast cancer. In patients with cancer this may indicate progression of bony metastasis. If this occurs the drug should be discontinued. Watch female patients closely for signs of virilization. Some effects may not be reversible. Discontinue if cholestatic hepatitis with jaundice appears or liver tests become abnormal.

**Precautions:** Patients with cardiac, renal or hepatic derangement may retain sodium and water thus forming edema. Priapism or excessive sexual stimulation, oligospermia, reduced

ejaculatory volume, hypersensitivity and gynecostasia may occur. When any of these effects appear the androgen should be stopped.

**Adverse Reactions:** Acne. Decreased ejaculatory volume. Gynecostasia. Edema. Hypersensitivity, including skin manifestations and anaphylactoid reactions. Priapism. Hypercalcemia (especially in immobile patients and those with metastatic breast carcinoma). Virilization in females. Cholestatic jaundice.

**How Supplied:**

2 mg — bottles of 100 scored tablets.

5 mg — bottles of 50 scored tablets.

10 mg — bottles of 50 scored tablets.

For additional product information, see your Upjohn representative or consult the package circular.

J-3262-4 MED B-6-S (MAH)

\*Cecil-Loeb. Textbook of Medicine, Vol. II, ed. 13. Beeson, P. B. and McDermott, W. eds. Philadelphia, W. B. Saunders Co., 1971, p. 1816.

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# Where do you stand on this Legislation? Test Yourself:

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# Synthroid<sup>®</sup>

(sodium levothyroxine)

## the smooth road to thyroid replacement therapy.

**Synthroid is T<sub>4</sub>.**  
It provides your patients with  
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thyroid replacement therapy.



Free Tab-Minder sample  
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**Indications:** SYNTHROID (sodium levothyroxine) is specific replacement therapy for diminished or absent thyroid function resulting from primary or secondary atrophy of the gland, congenital defect, surgery, excessive radiation, or antithyroid drugs. Indications for SYNTHROID (sodium levothyroxine) **Tablets** include myxedema, hypothyroidism without myxedema, hypothyroidism in pregnancy, pediatric and geriatric hypothyroidism, hypopituitary hypothyroidism, simple (nontoxic) goiter, and reproductive disorders associated with hypothyroidism. SYNTHROID (sodium levothyroxine) **for Injection** is indicated for intravenous use in myxedematous coma and other thyroid dysfunctions where rapid replacement of the hormone is required. The injection is also indicated for intramuscular use in cases where the oral route is suspect or contraindicated due to existing conditions or to absorption defects, and when a rapid onset of effect is not desired.

**Precautions:** As with other thyroid preparations, an overdosage of SYNTHROID (sodium levothyroxine) may cause diarrhea or cramps, nervousness, tremors, tachycardia, vomiting and continued weight loss. These effects may begin after four or five days or may not become apparent for one to three weeks. Patients receiving the drug should be observed closely for signs of thyrotoxicosis. If indications of overdosage appear, discontinue medication for 2-6 days, then resume at a lower dosage level. In patients with diabetes mellitus, careful observations should be made for changes in insulin or other antidiabetic drug dosage requirements. If hypothyroidism is accompanied by adrenal insufficiency, such as Addison's Disease (chronic adrenocortical insufficiency), Simmonds's Disease (panhypopituitarism) or Cushing's syndrome (hyperadrenalism), these dysfunctions must be corrected prior to and during SYNTHROID (sodium levothyroxine) administration. The drug

should be administered with caution to patients with cardiovascular disease; development of chest pains or other aggravations of cardiovascular disease requires a reduction in dosage.

**Contraindications:** Thyrotoxicosis, acute myocardial infarction. **Side effects:** The effects of SYNTHROID (sodium levothyroxine) therapy are slow in being manifested. Side effects, when they occur, are secondary to increased rates of basal metabolism; sweating, heart palpitations with or without pain, leg cramps, and weight loss. Diarrhea, vomiting, and nervousness have also been observed. Myxedematous patients with heart disease have died from abrupt increases in dosage of thyroid drugs. Careful observation of the patient during the beginning of any thyroid therapy will alert the physician to any untoward effects.



It has been shown that *Synthroid* (T<sub>4</sub>) converts to T<sub>3</sub> at the cellular level to supply metabolic needs.<sup>1, 2</sup>

1 *Synthroid* is T<sub>4</sub>.

2 Because T<sub>4</sub> converts to T<sub>3</sub> at the cellular level, it provides full thyroid replacement at maintenance doses.<sup>1, 2</sup>

3 T<sub>4</sub> hormone content is controlled by chemical assay.

4 *Synthroid* is assayed chemically; no biologic test is necessary to measure potency.

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6 *Synthroid* is the most prescribed brand name of thyroid in the U.S. and Canada.

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9 On a daily basis, *Synthroid* is cost competitive with other thyroid products.

The smooth road to thyroid replacement therapy.

**Synthroid**<sup>®</sup>  
(sodium levothyroxine)

In most cases with side effects, a reduction of dosage followed by a more gradual adjustment upward will result in a more accurate indication of the patient's dosage requirements without the occurrence of side effects.

**Dosage and Administration:** The activity of 0.1 mg. SYNTHROID (sodium levothyroxine) TABLET is equivalent to approximately one grain of thyroid, U.S.P. Administer SYNTHROID tablets as a single daily dose. In hypothyroidism without myxedema, the usual initial adult dose is 0.1 mg. daily, and may be increased by 0.1 mg. every 30 days until proper metabolic balance is attained. Clinical evaluation should be made monthly and PBI measurements about every 90 days. Final maintenance dosage will usually range from 0.2-0.4 mg. daily. In adult myxedema, starting dose should be 0.025 mg. daily. The

dose may be increased to 0.05 mg. after two weeks and to 0.1 mg. at the end of a second two weeks. The daily dose may be further increased at two-month intervals by 0.1 mg. until the optimum maintenance dose is reached (0.1-1.0 mg. daily).

**Supplied:** Tablets: 0.025 mg., 0.05 mg., 0.1 mg., 0.15 mg., 0.2 mg., 0.3 mg., 0.5 mg., scored and color-coded, in bottles of 100, 500, and 1000. Injection: 500 mcg. lyophilized active ingredient and 10 mg. of Mannitol, U.S.P., in 10 ml. single-dose vial, with 5 ml. vial of Sodium Chloride Injection, U.S.P., as a diluent. SYNTHROID (sodium levothyroxine) for Injection may be administered intravenously utilizing 200-400 mcg. of a solution containing 100 mcg. per ml. If significant improvement is not shown the following day, a repeat injection of 100-200 mcg. may be given.

1. Braverman, L. E., Ingbar, S. H., and Sterling, K.: Conversion of Thyroxine (T<sub>4</sub>) to Triiodothyronine (T<sub>3</sub>) in Athyreotic Human Subjects, J. Clin. Invest. 49:855-64, 1970.

2. Surks, M. I., Schadow, A. R., and Oppenheimer, J. H.: A New Radioimmunoassay for Plasma L-Triiodothyronine: Measurements in Thyroid Disease and in Patients Maintained on Hormonal Replacement. J. Clin. Invest. 51:3104-13, 1972.



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The civilized solution to the age-old problem of diarrhea.

The evolution of Donnagel® PG:

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Powdered opium, the therapeutic equivalent of paregoric—without the unpleasant taste—to promote the production of formed stools and lessen the urge.

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Donnagel with paregoric equivalent.

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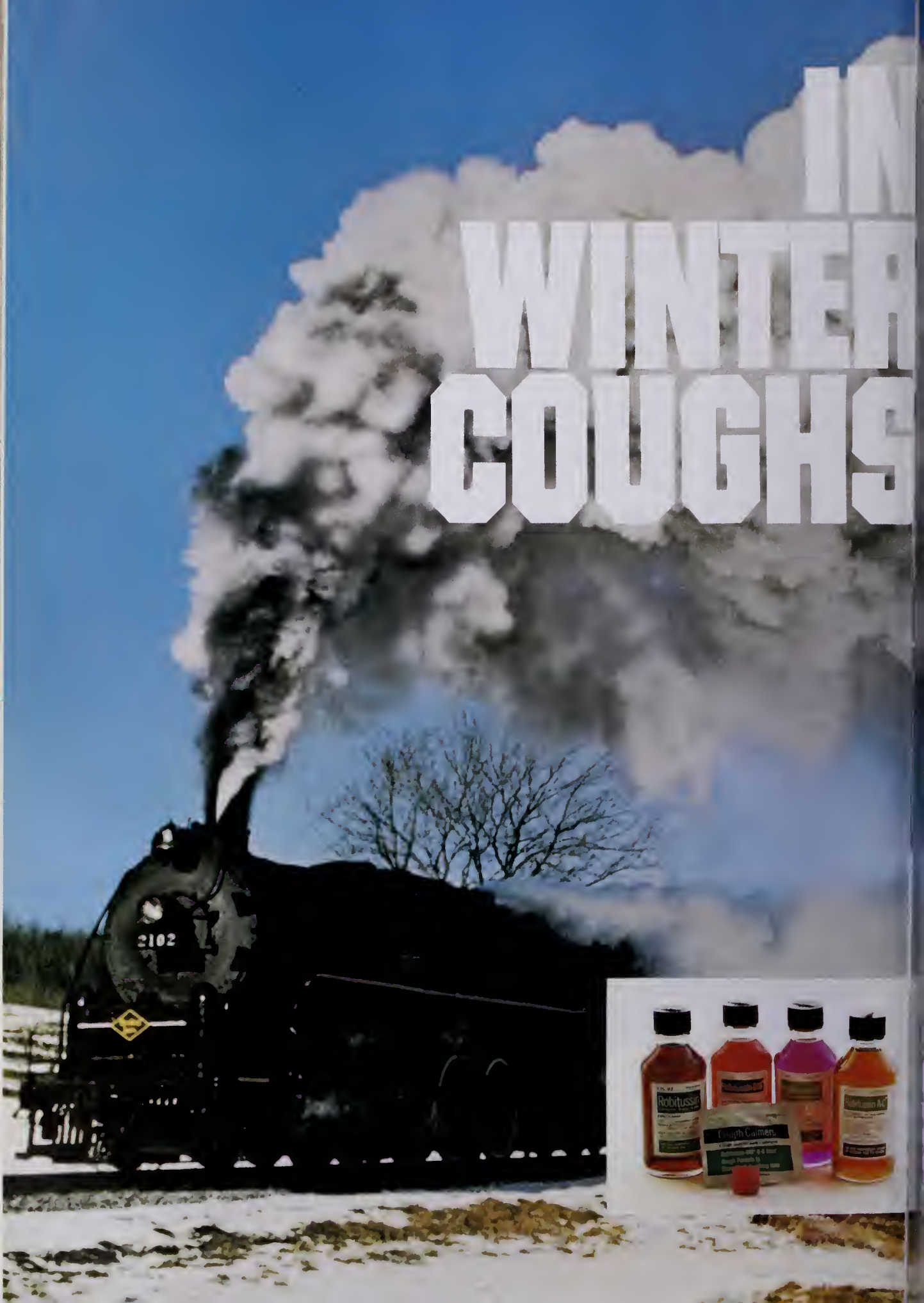
Kaolin . . . . .	6.0 g.
Pectin. . . . .	142.8 mg.
Hyoscyamine sulfate . . . . .	0.1037 mg.
Atropine sulfate . . . . .	0.0194 mg.
Hyoscine hydrobromide. . . . .	0.0065 mg.
Powdered opium, USP. . . . .	24.0 mg.
(equivalent to paregoric 6 ml.)	
(warning: may be habit forming)	
Sodium benzoate	
(preservative). . . . .	60.0 mg.
Alcohol, 5%	

Ⓒ Available on oral prescription or without prescription in compliance with applicable state and local law.

**A·H·ROBINS**

A. H. Robins Company, Richmond, Virginia 23220

# IN WINTER COUGHS





# CLEAR THE TRACT WITH THE ROBITUSSIN<sup>®</sup> LINE

Select the Robitussin<sup>®</sup>  
"Clear-Tract" Formulation  
that Treats Your Patient's  
Individual Coughing  
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	Expectorant- Demulcent	Cough Suppressant	Antihistamine	Long-Acting (6-8 hours)	Nasal, Sinus Decongestant	Non-Narcotic
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ROBITUSSIN A-C <sup>®</sup>	●	●	●			●
ROBITUSSIN-DM <sup>®</sup>	●	●		●		●
ROBITUSSIN-PE <sup>®</sup>	●				●	●
COUGH CALMERS <sup>®</sup>	■	■		■		■

Use this handy chart as a guide in selecting the formula that provides the benefits you want for your patient.

The coughing season is here again. Time to rely on the four Robitussins and Cough Calmers to help clear the lower respiratory tract. All contain glyceryl guaiacolate, the efficient expectorant that works systemically to help increase the output of lower respiratory tract fluid. The enhanced flow of less viscid secretions soothes the tracheobronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise. Available on your prescription or recommendation.

For coughs of colds and "flu"

## ROBITUSSIN<sup>®</sup>

Each 5 cc. contains:

Glyceryl guaiacolate ..... 100 mg.  
Alcohol, 3.5%

For unproductive allergic coughs

## ROBITUSSIN A-C<sup>®</sup> ☑

Each 5 cc. contains:

Glyceryl guaiacolate ..... 100 mg.  
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(warning: may be habit forming)  
Alcohol, 3.5%

Non-narcotic for 6-8 hr. cough control

## ROBITUSSIN-DM<sup>®</sup>

Each 5 cc. contains:

Glyceryl guaiacolate ..... 100 mg.  
Dextromethorphan hydrobromide ..... 15 mg.  
Alcohol, 1.4%

Robitussin-DM in solid form for "coughs on the go"

## COUGH CALMERS<sup>®</sup>

Each Cough Calmer contains:

Glyceryl guaiacolate ..... 50 mg.  
Dextromethorphan hydrobromide ..... 7.5 mg.

Relieves cough, clears sinuses and nasal passages—  
keeps them "drip-dry" but not bone dry

## ROBITUSSIN-PE<sup>®</sup>

Each 5 cc. contains:

Glyceryl guaiacolate ..... 100 mg.  
Phenylephrine hydrochloride ..... 10 mg.  
Alcohol, 1.4%

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# How strong must a tranquilizer be for severe anxiety?

## As strong as Librium® 25 mg (chlordiazepoxide HCl)



The achievement of desired therapeutic results is often a function of the dosage strength as well as the drug's intrinsic action. Thus, when anxiety is *severe*, the 25-mg strength of Librium frequently provides the necessary antianxiety action with a minimum of unwanted adverse reactions. Librium 25 mg is a convenient dosage form for the relief of severe, incapacitating anxiety, specifically formulated to supplement your counsel and reassurance.

### Benefits-to-risks ratio permits higher dosage

For over 13 years, Librium has been recognized for its excellent benefits-to-risks ratio, an asset in the *higher* dosage ranges as in more common clinical applications. Thus, the frequency of dosage with Librium 25 mg can be flexibly adjusted to the needs and response of the individual patient, up to 100 mg daily if required. Total daily dosage for the elderly and debilitated should not exceed 20 mg. When severe anxiety has been reduced, Librium dosage should be correspondingly reduced or discontinued entirely.



basic support  
in severe anxiety  
**Librium® 25 mg**  
(chlordiazepoxide HCl)  
1 capsule t.i.d./q.i.d.



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Relief of anxiety and tension occurring alone or accompanying various disease states.

**Contraindications:** Patients with known hypersensitivity to the drug.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age require that its potential benefits be weighed against its possible hazards.

**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

**Adverse Reactions:** Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

**Supplied:** Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.





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## **The Nitroblue Tetrazolium Dye Test: A New Counterstaining Technique**

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Everybody experiences psychic tension.



Most people can handle this tension.



Some people develop excessive psychic tension and need your counseling,



and a few may need counseling  
*and* the psychotropic action of Valium® (diazepam).



Before deciding to make Valium (diazepam) part of your treatment plan, check on whether or not the patient is presently taking drugs and, if so, what his response has been. Along with the medical and social history, this information can help you determine initial dosage, the possibility of side effects and the ultimate prospects of success or failure.

While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

**Dosage:** Individualize for maximum beneficial effect.

**Adults:** Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. **Geriatric or debilitated patients:** 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

**Supplied:** Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose® packages of 1000.

# Valium® (diazepam)

To help you manage excessive psychic tension



**when manhood ebbs...**  
due to testicular deficiency

## **Halotestin<sup>®</sup> 5 mg tablets** fluoxymesterone, Upjohn oral hormone replacement

*"When impotence is the principal complaint of a patient, it is usually the result of an emotional disturbance, in which case androgen therapy is valueless and at times may add to the psychic trauma."\**

**Halotestin<sup>®</sup> Tablets—2, 5 and 10 mg**  
(fluoxymesterone Tablets, U.S.P., Upjohn)

**Indications in the male:** Primary indication in the male is replacement therapy. Prevents the development of atrophic changes in the accessory male sex organs following castration: 1. Primary eunuchoidism and eunuchism. 2. Male climacteric symptoms when these are secondary to androgen deficiency. 3. Those symptoms of panhypopituitarism related to hypogonadism. 4. Impotence due to androgen deficiency. 5. Delayed puberty, provided it has been definitely established as such, and it is not just a familial trait.

**In the female:** 1. Prevention of postpartum breast manifestations of pain and engorgement. 2. Palliation of androgen-responsive

advanced, inoperable female breast cancer in women who are more than 1, but less than 5 years post-menopausal or who have been proven to have a hormone-dependent tumor, as shown by previous beneficial response to castration.

**Contraindications:** Carcinoma of the male breast. Carcinoma, known or suspected, of the prostate. Cardiac, hepatic or renal decompensation. Hypercalcemia. Liver function impairment. Prepubertal males. Pregnancy.

**Warnings:** Hypercalcemia may occur in immobilized patients, and in patients with breast cancer. In patients with cancer this may indicate progression of bony metastasis. If this occurs the drug should be discontinued. Watch female patients closely for signs of virilization. Some effects may not be reversible. Discontinue if cholestatic hepatitis with jaundice appears or liver tests become abnormal.

**Precautions:** Patients with cardiac, renal or hepatic derangement may retain sodium and water thus forming edema. Priapism or excessive sexual stimulation, oligospermia, reduced

ejaculatory volume, hypersensitivity and gynecostia may occur. When any of these effects appear the androgen should be stopped.

**Adverse Reactions:** Acne. Decreased ejaculatory volume. Gynecostia. Edema. Hypersensitivity, including skin manifestations and onophyloctoid reactions. Priapism. Hypercalcemia (especially in immobile patients and those with metastatic breast carcinoma). Virilization in females. Cholestatic jaundice.

**How Supplied:**

**2 mg**—bottles of 100 scored tablets.

**5 mg**—bottles of 50 scored tablets.

**10 mg**—bottles of 50 scored tablets.

For additional product information, see your Upjohn representative or consult the package circular.

J-3262-4 MED B-6-S (MAH)

\*Cecil-Loeb, Textbook of Medicine, Vol. II, ed. 13. Beeson, P. B. and McDermott, W. eds. Philadelphia, W. B. Saunders Co., 1971, p. 1816.

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# KENTUCKY MEDICAL ASSOCIATION

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15th ....	HAROLD L. BUSHEY, 406 Knox St., Box 770, Barbourville 40906 (606) 546-3024 1975

### BUYERS GUIDE

#### NOVEMBER BUYERS GUIDE FOR JOURNAL OF KMA 1973

Abbott Laboratories .....	750	Poythress, William P., Company .....	767
Blue Cross and Blue Shield of Kentucky .....	773	Robins, A. H., Company .....	771-772
Burroughs Wellcome Company .....	753	Roche Laboratories .....	706-707, 716-717, 720-723, 754-755, 762-765, 774
CIBA/Geigy Corporation .....	747	Schering Corporation .....	768-769
Geigy Phormochemicals .....	715	Searle Laboratories .....	748-749
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Lilly, Eli & Company .....	724	Southern Optical Company .....	770
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Merck Sharp & Dohme .....	758-759	Veterans Administration .....	713
Phormochemical Manufacturers Association .....	718-719		





# MESSAGE FROM THE PRESIDENT

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I WISH to commend those who served as delegates to our recent Annual Meeting and especially those who served on our reference committees. We were faced with more major decisions than I can recall in recent times. A wide range of views on all of them was introduced in the form of resolutions, etc., but the final action of the House of Delegates was a considered, reasoned, and wise position which deserves the appreciation of all members.

As anticipated, we are already receiving requests for information relative to abortion guidelines. All response which I have had to the position which the House of Delegates took on the abortion issue has been most favorable.

Understandably and justifiably, there exists throughout the state great apprehension about PSRO. Through the able efforts of our Kentucky Foundation for Medical Care President, David A. Hull, M.D., Kentucky is in an enviable position. I know of no other state who has enjoyed more support and cooperation from allied health groups and state governmental agencies than we. Whereas in other states, PSRO has been allowed to drive a deep wedge between medicine and allied groups. The reverse is true in Kentucky. We have done our part in planning. Now, the next move must come from the "Fed."

All physicians may be well assured that we shall observe closely and with a microscopic view all developments in the immediate future on PSRO, and we shall proceed slowly and with every precaution. Should there be any unexpected change in plans, you may be assured that every physician will be given the opportunity to express his views and present recommendations.

It doesn't require a crystal ball for one to visualize the most difficult year Kentucky medicine has had for a long time. As if the issues with which we dealt at our Annual Meeting were not enough, the next session of the Kentucky Legislature is only weeks away and here, too, I would predict the most difficult and toughest session we have faced in several years. I urge all physicians to maintain close liaison with their legislators.

In summary, it is relatively easy to conclude that now is a time when we must stand united as one, dedicated to maintaining a system of care with which we and our patients can live. I solicit your active participation, support, and guidance on all issues and will be pleased to hear from you.

*Fred C Rainey*

COMMITTEE FOR THE  
**STUDY OF MATERNAL MORTALITY**

---

**T**HIS 26-year-old married, white gravida I, para I was seen initially by her physician on 2/22/71 complaining of pain in the lower abdomen for three days. Her LMP was 1/25/71. She had been seen in the emergency room of another hospital on 2/20/71 and treated for pelvic inflammatory disease.

She was admitted to the hospital on 2/24/71 because of continued pain, nausea, vomiting, and abdominal tenderness. Her admission laboratory values were as follows: hemoglobin 9.9, hematocrit 29, WBC 16,800, 86 neutrophils, 9 lymphocytes, 3 monocytes. She received 600,000 units penicillin every six hours, intravenous fluids, and Numorphan 1 mg. every 4-6 hours for pain. A gynecologist examined the patient on 2/26/71. Physical examination revealed a tender abdomen with abdominal guarding. The cervix was tender to palpation and there were bilateral 4-5 cm adnexal masses. The admitting diagnosis was acute pelvic inflammatory disease and anemia. The suggested treatment was antibiotics and nasogastric suction. Surgery was deferred until the adnexal abscess could be drained vaginally. On 2/26/71 at 8 a.m., the patient's laboratory values were as follows: hemoglobin 4.6, hematocrit 13, WBC 10,000, 86 neutrophils, 11 lymphocytes, 2 monocytes. There was no evidence of external vaginal bleeding, but her abdomen was more distended. Culdocentesis was performed at 3:45 p.m. on 2/26/71 and unclotted blood was obtained. The diagnosis of an ectopic pregnancy was made. She was typed and cross-matched for four units of blood.

She was given four units whole blood and was taken to the operating room at 5:30 p.m. on 2/26/71. At the time of exploratory laparotomy, a right tubal pregnancy was found with approximately 2,000 cc blood and old clots in the abdomen. The blood was removed and hemostasis was obtained. Her preoperative hematocrit was 23. She received a total of four units

of whole blood in the operating room and recovery room. Three thousand cc D-5 Ringers Lactate was ordered to follow at 125 cc per hour within 10 million units of penicillin added to each liter and 0.5 grams Chloromycetin. Her blood pressure at 11:35 p.m. on 2/26/71 was 10.3 and her hematocrit was 29.

At 4:15 a.m., 2/27/71, the resident gynecologist was called to see the patient because of difficulty in breathing. She was having severe respiratory distress and was cyanotic. Her blood pressure was 160/80 and her pulse rate was 136. She was given 1.5 mg digoxin intravenously, 1 ml. Mercuhydrin intramuscularly and transferred to the Intensive Care Unit. Her right pupil was noted to be larger than her left pupil, and the patient was thought to have had a cerebral vascular accident. She received 20 mg. Furosemide intravenously. A chest x-ray was obtained and was compatible with congestive heart failure. At 4:30 a.m. on 2/28/71 her hemoglobin was 10.9 and her hematocrit 32. At 8 a.m. her color was described as poor and her chest was congested. Her central venous pressure was 8.

She had received 6,000 ml of fluid during the preceding 26 hours, and 8 units of whole blood. Laboratory values were as follows: Sodium 139, potassium 4.2, chloride 104, CO<sub>2</sub> 28, pH 7.41, pCO<sub>2</sub> 45, PO<sub>2</sub> 36, CO<sub>2</sub> 28, platelet count 208,000, fibrinogen 322 mg. %. She was placed on a pressure respirator, and hourly urine output. Her central venous pressure was kept between 5 and 10. Her pupils remained unequal and her optic disc suggested increased cerebral pressure.

She remained comatose, unresponsive, and had no voluntary respiration. Both pupils were dilated and fixed, and there was no eye movement. A lumbar puncture was done. The opening pressure was 170 and the cerebrospinal fluid was clear.

She was given 200 mg Solucortef intraven-



## Maternal Mortality

(Continued)

ously initially, followed by 100 mg Solucortef every four hours. Armine was required to maintain her blood pressure. She failed to respond and became anuric. An EEG at 1:25 p.m. on 3/1/71 revealed no cerebral activity.

An autopsy showed massive pulmonary edema with superimposed bronchial pneumonia, acute renal tubular necrosis, and central nervous system petechial hemorrhages with necrosis.

### Comment

The Committee classified this death as a direct obstetrical death in that there was a delay in diagnosis. Pelvic inflammatory disease can mimic ectopic pregnancy and whenever the possibility of an ectopic pregnancy exists the immediate procedures must be carried out to establish a diagnosis. Culdocentesis should have been done much earlier. There was certainly an overload of both blood and intravenous fluids, so that congestive heart failure resulted with mass pulmonary edema and superimposed bronchial pneumonia and acute tubular necrosis as revealed by autopsy. This case illustrates again the tremendous variability in the clinical course of ectopic pregnancy which is one of the most difficult conditions to diagnose but can be catastrophic when not properly cared for.

**PHYSICIANS (2), GENERAL MEDICINE** — For Intermediate Medical Service and Out-Patient Clinic. Full time, 630 bed division of VA General Hospital with medical school affiliation. Salary negotiable depending on qualifications. Liberal fringe benefits. License in any state acceptable. Non-discrimination in employment. Write: C. I. Schwartz, M.D., Chief of Staff, Veterans Administration Hospital, Leestown Division, Lexington, Kentucky 40507.

## Letter to the Editor

Dear Editor:

As the primary provider of comprehensive physical medicine and rehabilitation care for the spinal cord injured patients of Kentucky, we are in complete agreement with Doctors Norrell and Brocklehurst (in *The Journal of KMA*, September, 1973, "Spinal Injuries in Kentucky") for the need of comprehensive rehabilitation care for the spinal cord injured patient. We are also in agreement with the need for the provision of such care in Lexington.

In Louisville, close cooperation of neurologic and orthopedic surgeons with the Institute of Physical Medicine and Rehabilitation provides comprehensive rehabilitative services for the spinal cord injured patients of this catchment area. The total number treated at the Institute since 1970 (184 patients with significant neurological involvement) approximates the number seen at the University of Kentucky Medical Center (189 patients) during the reported eight-year period. The Institute provides the services of two physiatrists; rehabilitation nursing; physical, occupational and speech therapies; social service, and psychology in a 34-bed specialty hospital setting. In addition to the acute rehabilitation care, the Institute also provides long-term follow-up services on an out-patient basis.

The major problem at present is not the availability of care for these patients in the Commonwealth, but rather: 1. availability of comprehensive care in Eastern Kentucky; 2. availability of financial support—both state and federal for early care of these patients; 3. availability of financial support for training programs for both medical and paramedical personnel who could treat these patients.

Thomas A. Kelly, Jr., M.D.  
Medical Director  
Institute of Physical Medicine  
and Rehabilitation  
Louisville, Kentucky

# Continuing Educational Opportunities

From The

## KMA Postgraduate Medical Education Office

### IN KENTUCKY

#### NOVEMBER

- 17 Kentucky Regional Meeting, American College of Physicians, Stouffer's Inn, Louisville
- 19 "The Killers" series on "Heart Disease," KET television stations, 8 p.m., EST

#### DECEMBER

- 7-8 Mid-America College Health Association Annual Meeting, Executive Inn, Louisville
- 17 "The Killers" series on "Genetic Defects," KET television stations, 8 p.m., EST

#### JANUARY

- 14 "The Killers" series on "Pulmonary Disease," KET television stations, 8 p.m., EST
- 16-17 Northern Kentucky Seminar, Kentucky Academy of Family Physicians, Ft. Mitchell

### IN SURROUNDING STATES

#### NOVEMBER

- 12-15 Southern Medical Association Annual Meeting, San Antonio

#### DECEMBER

- 1-5 Clinical Convention, American Medical Association, Anaheim, California
- 5-6 Postgraduate course, "Advances in Ophthalmology," Cleveland Clinic Foundation, Cleveland

### FEBRUARY

- 1-3 AMA Council on Medical Education Congress, Palmer House, Chicago

### SCHEDULE OF UPCOMING PROGRAMS ON NETWORK FOR CONTINUING MEDICAL EDUCATION

(For listing of stations, see October issue, page 676)

#### November 19-December 2

**HEARING LOSS: A THREAT AT ANY AGE**, Merrill Goodman, M.D., Director of Otolaryngology at Long Island Jewish—Hillside Medical Center, N.Y.

**TIBETAN MEDICINE: A THOUSAND-YEAR-OLD PRACTICE**, Donald G. Dawe, Th.D., Professor of Theology, Union Theological Seminary, Richmond; and James L. Mathis, M.D., Professor and Chairman of the Department of Psychiatry, Medical College of Virginia; William Regelson, M.D., Professor and Chairman, Department of Psychiatry, Medical College of Virginia; William Stepka, Ph.D., Professor of Pharmacognosy, School of Pharmacy, all of Virginia Commonwealth University, Richmond, Va.

**NUCLEAR MEDICINE AND THE COMMUNITY HOSPITAL**, Alexander D. Crosett, Jr., M.D., Director, Division of Radiation Therapy and Nuclear Medicine at Overlook Hospital, Summit, N.J.

#### December 3-December 16

**EMERGENCY CLOSED TUBE THORACOSTOMY**, produced by the Center for Continuing Medical Education, Ohio State University College of Medicine in Columbus, Ohio.

**DIAGNOSING AND TREATING STRABISMUS**, Virginia Lubkin, M.D., Ophthalmologist and Clinical Assistant Professor of Ophthalmology at Mt. Sinai School of Medicine, New York, N.Y.

**DRUG INTERACTION: THE CASE OF THE PUSHY ANTIBIOTIC**, Harold C. Neu, M.D., Chief, Infectious Diseases, Columbia University College of Physicians and Surgeons, New York, N.Y.

### You Might Want to Mark These Dates On Your Calendar

May 15-18 Annual Assembly, Kentucky Academy of Family Physicians, Ramada Inn, Louisville

June 13-14 Emergency Health Care Seminar, Ramada Inn, Louisville

September 23-26 KMA Annual Meeting, Ramada Inn, Louisville





## acute arthritic inflammation...heat that freezes

In acute rheumatoid arthritis consider Tandearil. The anti-inflammatory action of Tandearil quickly helps reduce heat, pain, swelling, and stiffness. Results are usually seen in 3 or 4 days. Try it for a week when the symptoms defy aspirin control.

Remember that Tandearil is not a simple analgesic. It should not be used on patients responding to routine therapy. Before using, please read the prescribing information. It's summarized below.

## Tandearil® helps take the heat off oxyphenbutazone NF Geigy

Tablets of 100 mg.

**Important Note:** This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions (symptoms of blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

**Indications:** Acute gouty arthritis, rheumatoid arthritis, rheumatoid spondylitis.

**Contraindications:** Children 14 years or less; senile patients; history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia; history or presence of drug allergy; blood dyscrasias; renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema; stomatitis and salivary gland enlargement due to the drug; polymyalgia rheumatica and temporal arteritis; patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

**Warnings:** Age, weight, dosage, duration of therapy, existence of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against po-

tential risk of severe, even fatal, reactions.

The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonyleurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

**Precautions:** The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

**Adverse Reactions:** This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia,

gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement. (B)98-146-800-F (10/71)

For complete details, including dosage, please see full prescribing information.

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Chronic tolerance studies have confirmed the relative safety of Dalmane (flurazepam HCl); no depression of cardiac or respiratory function was noted in patients administered recommended or higher doses for as long as 90 consecutive nights.

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No sleep research has been as rigorously evaluated in the sleep research laboratory as Dalmane. Insomnia patients given one 30-mg capsule of Dalmane at bedtime, on average: fell asleep within 17 minutes, had fewer nighttime awakenings, spent less time awake after sleep onset, and slept for 7 to 8 hours with no need to repeat dosage during the night.



sleep with  
consistency

Dalmane (flurazepam HCl) is a distinctive sleep medication—a benzodiazepine specifically indicated for insomnia. It is not a barbiturate or methaqualone, nor is it related chemically to any other available hypnotic.

When your evaluation of insomnia indicates the need for a sleep medication, consider Dalmane—a single entity nonnarcotic, nonbiturate agent proved effective and relatively safe for relief of insomnia.

Dalmane has been shown to be consistently effective even during consecutive nights of administration, with no need to increase dosage.

**DALMANE**<sup>®</sup>  
(flurazepam HCl)

**When restful sleep  
is indicated**

**One 30-mg capsule *h.s.*—usual adult dosage**  
(15 mg may suffice in some patients).

**One 15-mg capsule *h.s.*—initial dosage for elderly or debilitated patients.**

**Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:**

**Indications:** Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

**Contraindications:** Known hypersensitivity to flurazepam HCl.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

**Precautions:** In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

**Adverse Reactions:** Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.

**Dosage:** Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

**Supplied:** Capsules containing 15 mg or 30 mg flurazepam HCl



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# ***It's time for action to defend the laws and regulations that protect your patients against drug substitution.***

**These professional and trade organizations are united in supporting antisubstitution statutes and regulations:**

The American Academy of Dermatology

The Board of Directors of the  
American Academy of Family  
Physicians

The Executive Board of the  
American Academy of Neurology

The Committee on Drugs of the  
American Academy of Pediatrics

The American College of Allergists

The Executive Committee of the  
American College of Obstetricians  
and Gynecologists

The Board of Regents of the  
American College of Physicians

The Board of Trustees of the  
American Dental Association

The Board of Trustees of the  
American Medical Association

The American Psychiatric Association

The Executive Committee of the  
National Association of Retail  
Druggists

The Board of Directors of the  
Pharmaceutical Manufacturers  
Association

The National Wholesale Druggists'  
Association





## Joint Statement on Antisubstitution Laws and Regulations

The purpose of this statement is to affirm the support of the participating organizations for the laws, regulations and professional traditions which prohibit the unauthorized substitution of drug products.

Traditionally, physicians, dentists and pharmacists have worked cooperatively to serve the best interests of patients. Productive cooperation has been achieved through mutual respect as well as a common concern for the ideals of public service. This mutual respect has been reflected, in part, by joint support over the years for the adoption and enforcement of laws and regulations specifically prohibiting unauthorized substitution and encouraging joint discussion and selection of the source of supply of drug products. The basic principles of medical, dental and pharmacy practice are thus utilized and preserved in the interest of patient welfare.

The antisubstitution laws have not obstructed enhancement of the professional status of pharmacy any more than they have in and of themselves guaranteed absolute protection from unsafe drugs, or freed physicians, dentists and pharmacists from their responsibilities to patients. As a practical matter, however, such laws and regulations encourage interprofessional communications regarding drug product selection and assure each profession the opportunity to exercise fully its expertise in drug usage, to the advantage of patients.

Physicians and dentists should be urged to increase the frequency and regularity of their contacts with pharmacists in selection of quality drug products, recognizing that

economies to patients can be improved through such communication, taking into account the patients' needs. The pharmacist's knowledge of the chemical characteristics of drugs, their mode of action, toxic properties and other characteristics that assist in making drug selection decisions should be utilized to the fullest extent practicable by physicians and dentists in serving their patients.

Since drug product selection entails knowledge derived from clinical experience, the physician's and dentist's roles in product selection remain primary and do not permit delegation of decisions requiring medical and dental judgments. A broader role in therapy will evolve for pharmacists as improved understanding and cooperation among the professions continue to grow.

There has been no evidence that there are convincing reasons to modify or repeal existing laws and regulations prohibiting the unauthorized substitution of another drug product for the one specified by a prescriber. It is our belief that such laws and regulations merit the joint support of the medical, dental and pharmaceutical professions and the pharmaceutical industry.

Add your opinion to the weight of other professionals and send it to your state assemblyman or legislator.

*Pharmaceutical Manufacturers Association  
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# ROCHE announces new **BACTRIM**<sup>TM</sup>

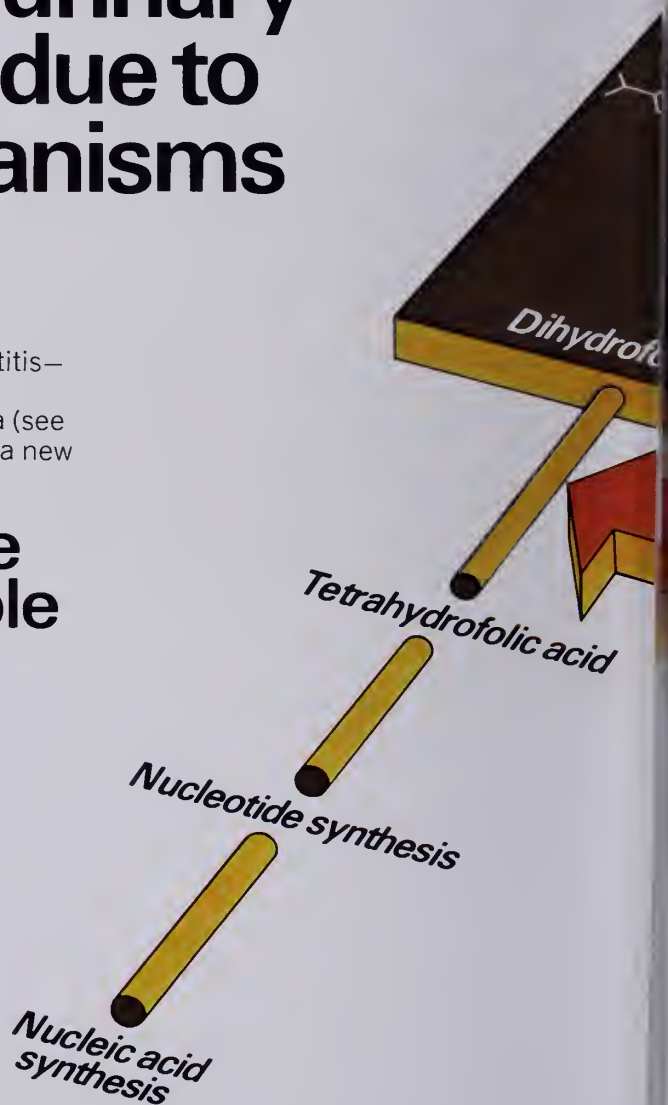
Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

## a new type of antibacterial for a two-pronged attack against chronic urinary tract infections due to susceptible organisms

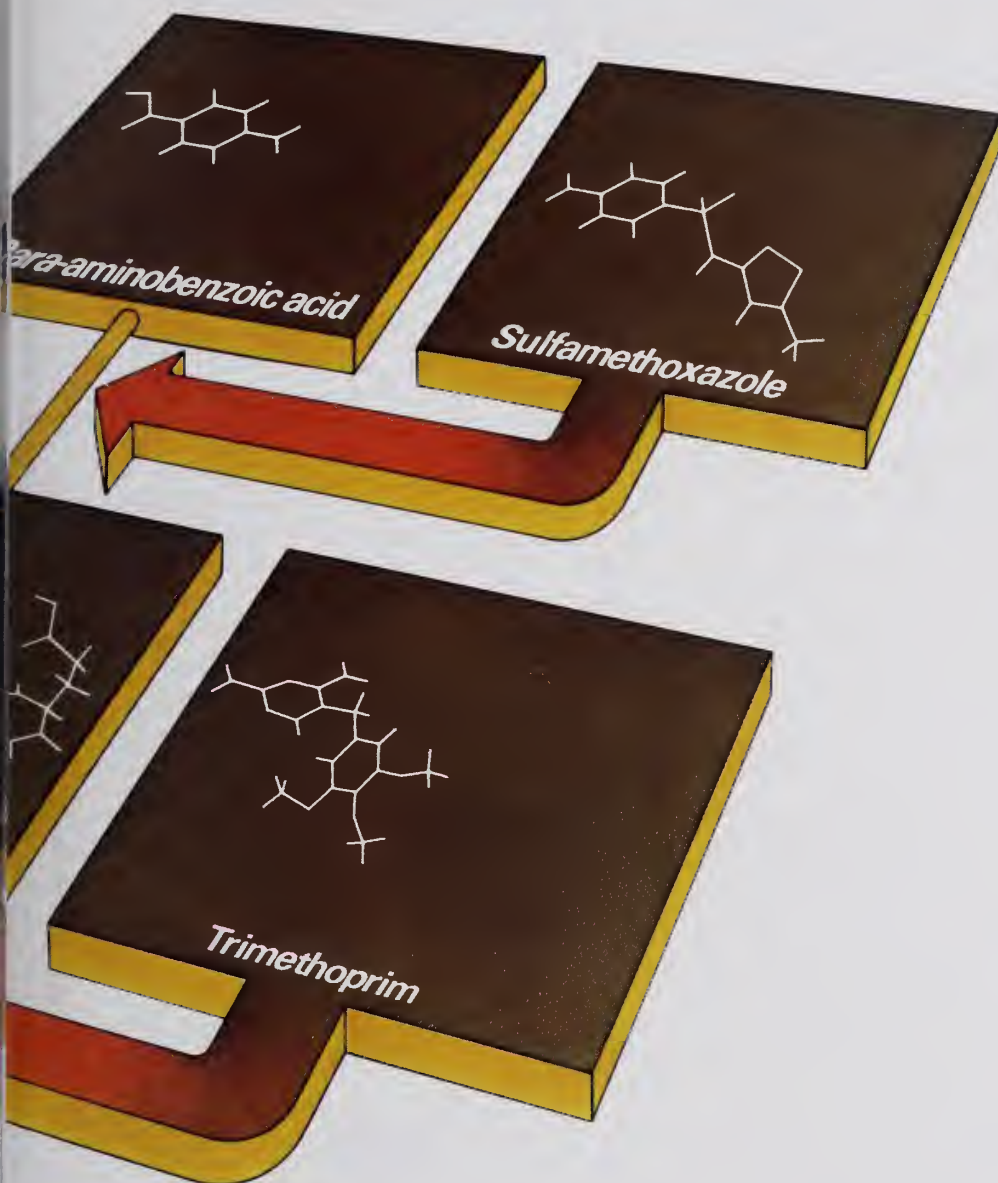
Bactrim is highly effective in the treatment of these infections—primarily pyelonephritis, pyelitis and cystitis—when due to susceptible organisms. This efficacy is related to the unique mode of action against bacteria (see illustration), an action that, in effect, makes Bactrim a new type of antibacterial.

### Bactrim interrupts the life cycle of susceptible bacteria

*Unique mode of action interrupts the life cycle at two important points, thereby impeding the production of nucleic acids and proteins essential to these bacteria. These consecutive interruptions occur because sulfamethoxazole and trimethoprim resemble naturally existing substrates. By competitive replacement of these substrates, they inhibit further synthesis.*







new **BACTRIM**<sup>TM</sup>

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

**for chronic urinary tract infections**

Before prescribing, please see complete product information on last page of advertisement.

## Excellent clinical response in chronic urinary tract infections even with obstructive complications

A multiclinic, double-blind study\* of response to a ten-day course of therapy in 471<sup>†</sup> patients with chronic urinary tract infections demonstrated the superiority of Bactrim. On the 10th day after initiation of therapy, 91.7% (of 168 patients) showed significant bacteriological response to Bactrim, compared with 81.2% (of 144 patients) to trimethoprim and 64.5% (of 155 patients) to sulfamethoxazole. More than half of these patients had obstructive complications.

## Excellent response maintained

Bactrim proved equally impressive in maintaining this bacteriological response. In the above study, after a ten-day course of therapy with Bactrim, 68.4% of patients with chronic urinary tract infections *maintained* response for up to 42 consecutive days, compared with 59.7% with trimethoprim and 44.4% with sulfamethoxazole. These results are particularly noteworthy considering the number of patients with obstructive complications—cases regarded as being notoriously difficult to treat.

## Prescribing considerations

**Clinical Limitations:** Currently, the increasing frequency of resistant organisms is a limitation of the usefulness of all antibacterial agents, especially in the treatment of chronic and recurrent urinary tract infections. Not recommended for children under twelve.

**Contraindications:** Hypersensitivity to trimethoprim or sulfonamides. Pregnancy and during the nursing period.

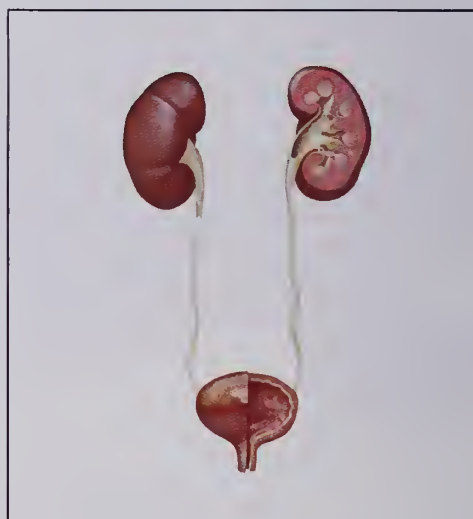
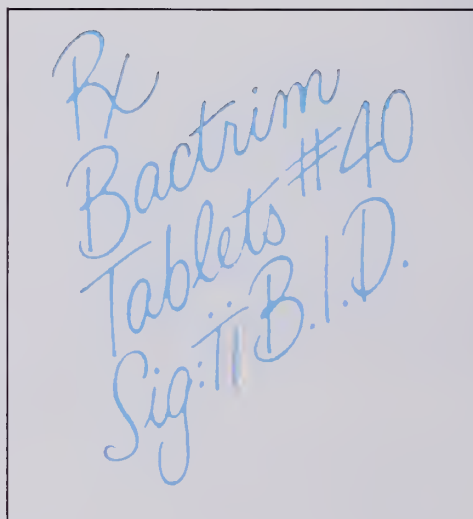
**Warnings and Precautions:** Both sulfamethoxazole and trimethoprim have been reported to interfere with hematopoiesis. Complete blood counts should be done frequently. If a significant reduction in the count of any formed blood element is noted, Bactrim should be discontinued. Bactrim should be given with caution to patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. Maintain adequate fluid intake. Urinalyses with careful microscopic examination and renal function tests should be performed during therapy, particularly for those patients with impaired renal function.

**Adverse Effects:** Among the most common side effects are nausea, vomiting, rash, leukopenia and elevations in SGOT and creatinine.

**Usual adult dosage: two tablets every twelve hours for 10 to 14 days; no loading dose required.**

\*Data on file, Hoffmann-La Roche Inc., Nutley, N.J. 07110

<sup>†</sup>4 patients not available for evaluation at day 10.



new **BACTRIM**<sup>TM</sup>

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

**for chronic urinary tract infections**



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110

Before prescribing, please consult complete product information on facing page.



## Complete Product Information:

**Description:** Bactrim is a synthetic antibacterial combination product, available in scored light-green tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole.

Trimethoprim is 2,4-diamino-5-(3,4,5-trimethoxybenzyl) pyrimidine. It is a white to light-yellow, odorless, bitter compound with a molecular weight of 290.3.

Sulfamethoxazole is *N*'-(5-methyl-3-isoxazolyl)sulfanilamide. It is an almost white in color, odorless, tasteless compound with a molecular weight of 253.28.

**Actions: Microbiology:** Sulfamethoxazole inhibits bacterial synthesis of dihydrofolic acid by competing with *para*-aminobenzoic acid. Trimethoprim blocks the production of tetrahydrofolic acid from dihydrofolic acid by binding to and reversibly inhibiting the required enzyme, dihydrofolate reductase. Thus, Bactrim blocks two consecutive steps in the biosynthesis of nucleic acids and proteins essential to many bacteria.

*In vitro* studies have shown that bacterial resistance develops more slowly with Bactrim than with trimethoprim or sulfamethoxazole alone.

*In vitro* serial dilution tests have shown that the spectrum of antibacterial activity of Bactrim includes the common urinary tract pathogens with the exception of *Pseudomonas aeruginosa*. The following organisms are usually susceptible: *Escherichia coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis* and indole-positive proteus species.

Representative Minimum Inhibitory Concentration Values for Bactrim-Susceptible Organisms (MIC—mcg/ml)				
Bacteria	Trimethoprim alone	Sulfamethoxazole alone	TMP/SMX (1:20)	
			TMP	SMX
<i>Escherichia coli</i>	0.05—1.5	1.0 —245	0.05—0.5	0.95— 9.5
<i>Proteus</i> spp. indole positive	0.5 —5.0	7.35 —300	0.05—1.5	0.95—28.5
<i>Proteus mirabilis</i>	0.5 —1.5	7.35 — 30	0.05—0.15	0.95— 2.85
<i>Klebsiella-Enterobacter</i>	0.15—5.0	0.735—245	0.05—1.5	0.95—28.5

**Human Pharmacology:** Bactrim is rapidly absorbed following oral administration. The blood levels of trimethoprim and sulfamethoxazole are similar to those achieved when each component is given alone. Peak blood levels for the individual components occur one to four hours after oral administration. The half-lives of sulfamethoxazole and trimethoprim, 10 and 16 hours respectively, are relatively the same regardless of whether these compounds are administered as individual components or as Bactrim. Detectable amounts of trimethoprim and sulfamethoxazole are present in the blood 24 hours after drug administration. Free sulfamethoxazole and trimethoprim blood levels are proportionately dose-dependent. On repeated administration, the steady-state ratio of trimethoprim to sulfamethoxazole levels in the blood is about 1:20.

Sulfamethoxazole exists in the blood as free, conjugated and protein-bound forms; trimethoprim is present as free, protein-bound and metabolized forms. The free forms are considered to be the therapeutically active forms. Approximately 44 percent of trimethoprim and 70 percent of sulfamethoxazole are protein-bound in the blood. The presence of 10 mg percent sulfamethoxazole in plasma decreases the protein binding of trimethoprim to an insignificant degree; trimethoprim does not influence the protein binding of sulfamethoxazole.

Excretion of Bactrim is chiefly by the kidneys through both glomerular filtration and tubular secretion. Urine concentrations of both sulfamethoxazole and trimethoprim are considerably higher than are the concentrations in the blood. When administered together as in Bactrim, neither sulfamethoxazole nor trimethoprim affects the urinary excretion pattern of the other.

**Indications:** Chronic urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, and, less frequently, indole-positive proteus species).

**Important note:** Currently, the increasing frequency of resistant organisms is a limitation of the usefulness of all antibacterial agents, especially in the treatment of chronic and recurrent urinary tract infections.

**Contraindications:** Hypersensitivity to trimethoprim or sulfonamides. Pregnancy and during the nursing period (see Reproduction Studies).

**Warnings:** Deaths associated with the administration of sulfonamides have been reported from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias. Experience with trimethoprim alone is much more limited, but it has been reported to interfere with hematopoiesis in occasional patients. In elderly patients concurrently receiving certain diuretics, primarily thiazides, an increased incidence of thrombopenia with purpura has been reported.

The presence of clinical signs such as sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. Complete blood counts should be done frequently in patients receiving Bactrim. If a significant reduction in the count of any formed blood element is noted, Bactrim should be discontinued.

At the present time, there is insufficient clinical information on the use of Bactrim in infants and children under 12 years of age to recommend its use.

**Precautions:** Bactrim should be given with caution to patients with impaired renal or hepatic function, to those with possible folate deficiency and to those with severe allergy or bronchial asthma. In glucose-6-phosphate dehydrogenase-deficient individuals, hemolysis may occur. This reaction is frequently dose-related. Adequate fluid intake must be maintained in order to prevent crystalluria and stone formation. Urinalyses with careful microscopic examination and renal function tests should be performed during therapy, particularly for those patients with impaired renal function.

**Adverse Reactions:** For completeness, all major reactions to sulfonamides and to trimethoprim are included below, even though they may not have been reported with Bactrim.

**Blood dyscrasias:** Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia.

**Allergic reactions:** Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis.

**Gastrointestinal reactions:** Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis.

**C.N.S. reactions:** Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness.

**Miscellaneous reactions:** Drug fever, chills, and toxic nephrosis with oliguria and anuria. Periarteritis nodosa and L. E. phenomenon have occurred.

The sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the thiazides) and oral hypoglycemic agents. Goiter production, diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. Cross-sensitivity may exist with these agents. Rats appear to be especially susceptible to the goitrogenic effects of sulfonamides, and long-term administration has produced thyroid malignancies in the species.

**Dosage and Administration:** Not recommended for use in children under 12 years of age.

The usual adult dosage is two tablets every 12 hours for 10 to 14 days.

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	2 tablets every 24 hours
Below 15	Use not recommended

**How Supplied:** Tablets, containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 1000; Prescription Paks of 40, available singly and in trays of 10. Imprint on tablets: ROCHE 50.

**Reproduction Studies:** In rats, doses of 533 mg/kg sulfamethoxazole or 200 mg/kg trimethoprim produced teratological effects manifested mainly as cleft palates. The highest dose which did not cause cleft palates in rats was 512 mg/kg sulfamethoxazole or 192 mg/kg trimethoprim when administered separately. In two studies in rats, no teratology was observed when 512 mg/kg of sulfamethoxazole was used in combination with 128 mg/kg of trimethoprim. However, in one study, cleft palates were observed in one litter out of 9 when 355 mg/kg of sulfamethoxazole was used in combination with 88 mg/kg of trimethoprim.

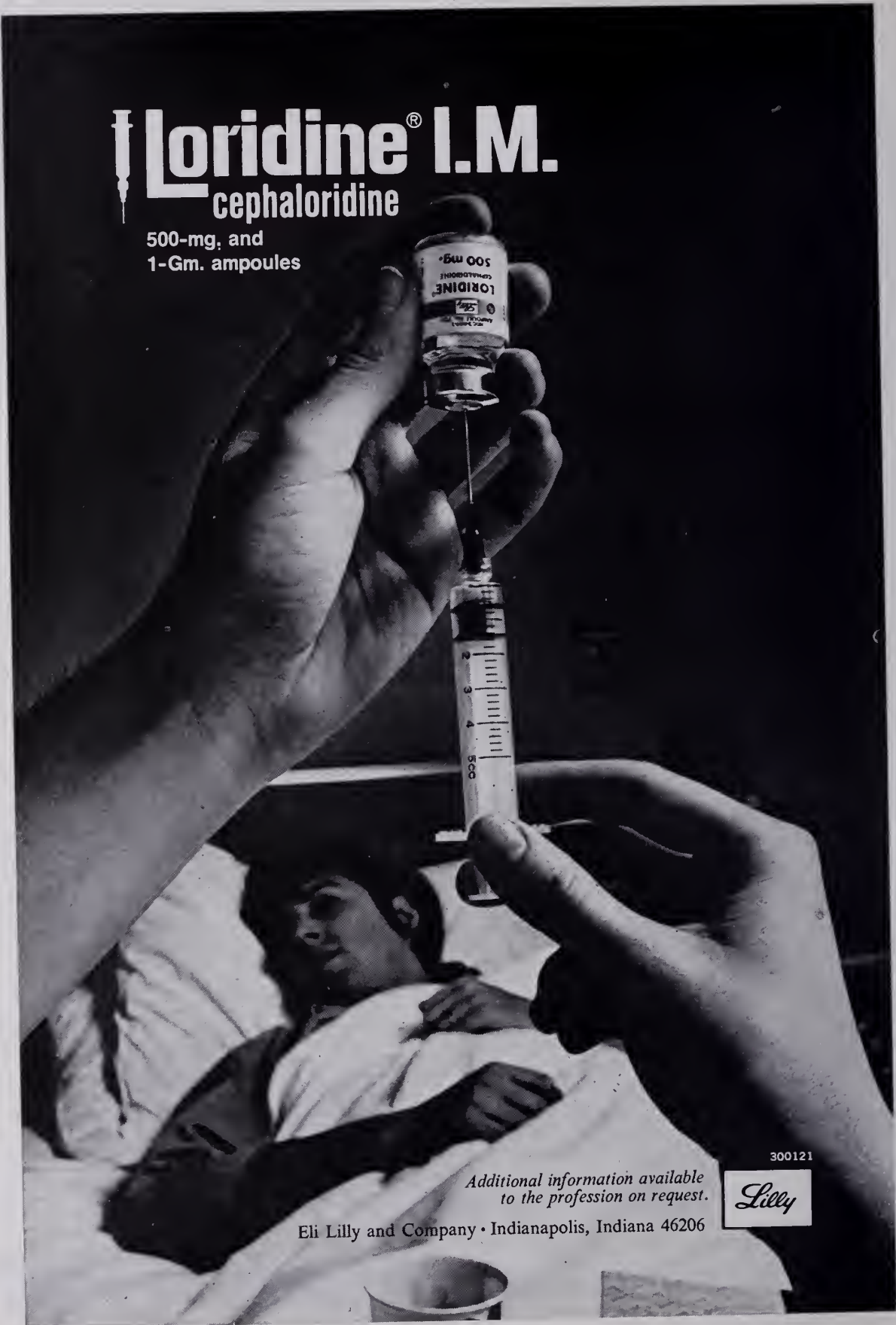
In rabbits, trimethoprim administered by intubation from days 8 to 16 of pregnancy at dosages up to 500 mg/kg resulted in higher incidences of dead and resorbed fetuses, particularly at 500 mg/kg. However, there were no significant drug-related teratological effects.

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## The Nitroblue Tetrazolium Dye Test: A New Counterstaining Technique†

MARTIN J. RAFF, M.D.\* AND JOHN T. BRAUN

Louisville, Kentucky

*The nitroblue tetrazolium (NBT) dye test is a histochemical technique useful in the evaluation of granulocyte function. A new counterstaining technique which minimizes the problems encountered with use of Wright's stain has been developed and is presented.*

THE nitroblue tetrazolium (NBT) dye test is a histochemical technique useful in the evaluation of neutrophil function. In the presence of infection, granulocytes involved in phagocytosis and intracellular killing of bacteria take up this dye. Activated nicotinamide-adenine-dinucleotide (NADH) oxidase systems cause the reduction of NBT to a blue-black intracellular diformazan precipitate. An NBT positive neutrophil is one in which deposits of diformazan can be seen. The percentage NBT positive cells of 100 consecutive neutrophils is referred to as the NBT dye test score.

In the normal host, a small fraction of neutrophils are constantly in the process of phagocytosis and therefore stimulated to reduce NBT. Patients with chronic granulomatous disease (CGD) have defective neutro-

phils, incapable of killing intracellular bacteria and reducing NBT<sup>1-3</sup>. In patients with normal granulocyte function, bacterial infection will result in a significant increase in the percentage of NBT positive neutrophils<sup>4-8</sup>. Increases over normal values, or positive NBT dye tests, have been reported in patients with active tuberculosis<sup>8-10</sup>. Positive tests are also found in patients with systemic fungal infections<sup>4</sup>. Normal or near normal NBT dye tests are found in patients with viral infections<sup>4,7-11</sup>. False-negative and false-positive NBT dye tests may occur<sup>6,10,12</sup>, due to the wide variance in the functional capacities of leukocyte populations.

The NBT dye test is simple to perform, utilizing blood films. These films are usually Wright-stained. The technique described below is a counterstain modification designed to eliminate sources of error inherent in the use of Wright's stain.

### Materials and Method

*Nitroblue tetrazolium dye* is prepared by dissolving 20 mg of NBT powder (Sigma Chemical Company, St. Louis, Mo.) in 10 ml of 0.9% saline plus 10 ml of 0.15 molar phosphate buffered saline, pH 7.2<sup>4</sup>. After mixing for 15 minutes at room temperature, the 0.1% solution is filtered through a 0.20 micron Millipore filter (Nalge, Rochester, N.Y.) to remove crystals or other impurities<sup>13</sup>. The dye is prepared fresh each week and kept at 4°C to in-

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hibit growth of contaminants.

*Counterstain* is prepared by adding 70 mg of fast green FCF, 50 mg of neutral red, and 10 mg of eosin Y (Eastman Organic Chemicals, Rochester, N.Y.) to 20 ml of 95% ethanol. After mixing in a closed container for 15 minutes, the counterstain is filtered through a 0.20 micron Millipore filter to remove particulate matter.

Venous blood is collected in tubes containing sufficient heparin to provide a final concentration of 10 units/ml of blood<sup>14</sup>. For example, 4.5 ml of blood is collected into "vacutainer" tubes (Becton, Dickinson & Co., Rutherford, N.J.) containing 50 units of heparin U.S.P. (Upjohn Co., Kalamazoo, Mich.) in 0.5 ml of 0.9% saline.

A volume of 0.1 ml of the NBT dye is pipetted into the center well of the cap from a #2006 polypropylene tube (Falcon, Oxnard, Calif.) and 0.1 ml of blood is added<sup>15</sup>. After thorough mixing by agitation it is placed in a petri dish and humidified with a pad of moist gauze. The dish is closed and incubated for 15 minutes at 37°C followed by 15 minutes at room temperature.

Using a Pasteur pipette the blood-dye mixture is again mixed thoroughly, and a small drop allowed to rapidly run down a dry slide precleaned with ethanol<sup>15</sup>.

The blood film is stained and fixed by covering with the counterstain for 15 minutes. The slide is then washed with distilled water, air dried, and examined microscopically under the oil immersion lens.

This technique produces neutrophils with red nuclei and light green granular cytoplasm. Eosinophils and basophils have the same staining pattern as neutrophils but can be identified by the larger, darker green staining granules. Erythrocytes are brown to gray-green in color. Monocytes have red nuclei but little or no cytoplasmic staining. Lymphocytes have red nuclei and no cytoplasmic staining. Contrast may be enhanced through use of a blue filter.

The number of neutrophils containing blue-black diformazan deposits out of the first 100 consecutive neutrophils counted is the percentage of NBT positive cells or NBT dye test score. Monocytes and platelets may also reduce NBT and should not be counted. Aggregations of cells and debris will often have extracellular

deposits of diformazan present and must be differentiated and excluded from the count.

## Results

Normal healthy controls have been found to have a mean of  $7.7 \pm 6.97\%$  NBT positive neutrophils in this laboratory. Patients with untreated bacterial infection show a range of values from 14 to 47% with a mean of  $26.5 \pm 14.3\%$ . Therefore the range of NBT dye test positive scores which is considered normal using this technique is 0 to 14%. Freeman and King<sup>15</sup> in a series of approximately 2,000 patients have found that 11% is a reliable upper limit to the normal range. Any value above the normal range may be considered indicative of the possible presence of bacterial, tuberculous, or systemic fungal infection and should tend to rule out viral infection. In addition to infections, some hematologic disorders<sup>17,18</sup> and acute myocardial infarction<sup>19</sup> have been found to give positive NBT dye tests. It is apparent that any condition which stimulates phagocytosis may stimulate reduction of NBT dye.

## Discussion

A new counterstaining technique for use with the NBT test is described. Whereas Wright's stain results in neutrophils having dark blue nuclei, the stain described here produces neutrophils with red nuclei on a pale green cytoplasm. This tends to obviate several difficulties encountered with the use of Wright's stain. It becomes relatively easy to distinguish between nuclear chromatin and diformazan deposits. Extracellular formazan can be differentiated from intracellular deposits with facility. In addition, cellular aggregates and debris do not stain dark blue as in Wright's stain and are therefore not misinterpreted as NBT positive cells.

As mentioned above, although the test is generally positive in bacterial and tuberculosis infections and negative in viral infections, there are false-positives and false-negatives<sup>6,9,12,20-22</sup>. Examples of false-positive NBT dye tests, other than the hematologic disorders<sup>17,18</sup> and myocardial infarction<sup>19</sup> mentioned above, are malaria<sup>6,23-26</sup>, other parasitic infections<sup>6,23,26</sup>, osteogenesis imperfecta<sup>27</sup>, and viral meningitis<sup>28</sup>. False-negative NBT dye tests have been re-



ported in CGD<sup>2,4</sup>, tuberculosis<sup>4,6,26</sup>, chronic cryptococcosis<sup>26</sup>, kwashiorkor<sup>29</sup>, untreated bacterial infections<sup>12</sup>, streptococcal pharyngitis<sup>30</sup>, and bacterial meningitis<sup>31</sup>.

The NBT dye test cannot be used in premature and newborn infants since the percentage of NBT reducing neutrophils in these patients is elevated in the absence of any infection<sup>3,9,32</sup>. The effect of steroids on the NBT test is controversial and conflicting results have been reported<sup>6,12,15,33,35</sup>. Most authors have found that steroids reduce the percent of NBT positive cells<sup>12,33-36</sup>. Antibiotic therapy instituted prior to obtaining an NBT dye test will also reduce the percentage of NBT reducing neutrophils<sup>5,6</sup>. The clinical response of patients receiving antibiotic therapy may be followed through the use of serial NBT tests, effective therapy producing decreasing percentages of NBT positive neutrophils<sup>6,8,37,38</sup>. Serial NBT dye tests have also been used in patients at risk of infection<sup>37,38</sup> and are therefore useful both as diagnostic and prognostic indices.

### Summary

A new technique for the counterstaining of NBT dye-test smears is described. The methodology, the basis for the reaction and the potential utility of the test is reviewed and discussed. The full range of applicability of this technique remains unclear and will require further study.

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# Ruptured Mycotic Aneurysms of the Abdominal Aorta†

GORDON L. HYDE, M.D., DAVID A. HULL, M.D. AND JOHN M. STOECKINGER, M.D.

Lexington, Kentucky

*Mycotic aneurysms of the aorta fortunately are quite rare. However, these do present serious problems to the surgeons as evidenced by the extremely poor survival rate of patients with mycotic aneurysms of the aorta<sup>1,2</sup>.*

TO this time there have been only six reported patients who have survived abdominal aorta resection and graft replacement in the face of a mycotic aneurysm. None of these patients had a ruptured abdominal aneurysm. It is the purpose of this paper to present a case of a ruptured mycotic aneurysm of the aorta which was resected, grafted and subsequently developed an aortoduodenal fistula that was successfully managed with removal of the aortic graft and insertion of bilateral axillary femoral grafts. Although the patient was fortunate to survive, some of the problems encountered are discussed which could possibly be averted in the future management of this problem.

## Case Report

C.M. is a 57-year-old man who was initially seen on May 11, 1969, with a ruptured abdominal aortic aneurysm. History revealed that he had had a carcinoma of the bladder resected several months previously and had recurrent urinary tract infections. Two weeks prior to admission he had left back pain and abdominal pain, being admitted on the urologic service. At that time he had a large palpable abdominal pulsatile mass—12 to 15 cms in size—extending far out into the left flank. His temperature was 104; hemoglobin, 9 grams; hematocrit, 31. The white blood count was reported as 33,000 with a shift to the left, with 93 PMN's. The patient was immediately pre-

pared for surgery, and on exploration was found to have a very large ruptured "sealed" retroperitoneal aneurysm. Upon entering the retroperitoneal area, a very foul-smelling, fecal-like odor was encountered. There was also some purulent drainage in this area, as evidenced upon opening the aneurysm itself after control had been obtained. This was cultured and after bleeding was controlled as well as debridement and irrigation with 1% Kanamycin solution, a 19 mm Dacron knitted graft was sutured to the end of the aorta about one-half inch below the renal vessels and to the common iliac vessels bilaterally as a bifurcation graft. Blood which was present in the retroperitoneal space exuded of the foul-smelling odor and was very dark and partially lysed, suggesting a rather long duration hemorrhage. A sleeve of graft was placed over the anastomosis and a flap of the aneurysm was preserved and sutured over the sleeve. This was then covered with omentum and the retroperitoneal space was closed.

Postoperatively, the patient did extremely well with no problems. He had excellent pulses in his feet. His cultures grew out *Proteus*, which was sensitive to Keflin, Streptomycin and Kanamycin. He was treated with 12 grams of Keflin intravenously daily for 14 days. At that time, he had had no complications and was ready to go home, even though we were very fearful of infection in the retroperitoneal area around the graft. He was extremely desirous of dismissal and was discharged. Blood cultures had been obtained and were negative after antibiotics had been stopped. He was dismissed on the 18th postoperative day.

We continued to follow the patient at weekly intervals. White blood count and temperature were observed. At no time did he reveal any evidence of complications. He gained weight and was thought to be doing exceedingly well.

Because of the fear of infection in the graft

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site, it was anticipated to obtain a translumbar aortogram to see whether or not pseudo-aneurysm formation might be occurring. Arrangements were made for the patient to have this done in early August, 1969, and suddenly on July 29, 1969, the patient developed massive upper gastrointestinal bleeding and was met in the emergency room and taken immediately to the X-ray Department, while blood was being obtained. AP and lateral translumbar aortography were carried out, revealing pseudo-aneurysm formation at the proximal anastomosis with a questionable leak from the left side of the anastomosis. However, it was still presumed that he had an aorto-duodenal fistula and he was taken immediately to the operating room. On exploration, the patient was found to have an indurated mass in the retroperitoneal area and the pylorus was opened. Blood was found to be coming from the distal duodenum. By palpation of the duodenum one could feel an ulcerated area just over the aorta in the duodenum. Finger control was obtained here and the chest was opened to obtain proximal control of the thoracic aorta. The graft was then freed up and found to be floating with clots around it and pseudo-aneurysm formation was found extending around the graft up to the proximal anastomosis with extension into the duodenum. The graft was removed and, with good proximal control, blood loss was kept at a minimum. At this time, however, there was a great deal of difficulty in suturing the very friable aortic stump. The stump was finally sutured with four layers of staples, utilizing the American stapling device just below the renal vessels. Adequate hemostasis was obtained in this manner and the area appeared dry. The common iliacs were then stapled bilaterally and the entire graft was removed. The area was then debrided very carefully and irrigated with copious amounts of Kanamycin solution. The duodenum was closed in three layers with cat gut. Because of some constriction in this area, anterior gastroenterostomy was also performed. Multiple sump drains were inserted and Heparin was given in the distal extremities.

The patient was closed and, following this procedure, was transferred to another operating room where he was re-prepped and re-draped. An 8 mm knitted Dacron graft was

sutured to both axillary arteries and taken to the common femorals with immediate restoration of pulses in the feet. The patient tolerated this portion of the procedure very well and did amazingly well in the postoperative period. However, on the seventh postoperative day, he developed bile-stained drainage from the retroperitoneal sump drains. On injection of the sumps, this proved to be a duodenal fistula and he was placed NPO (nothing by mouth) and started on intravenous hyperalimentation through a subclavian catheter<sup>3</sup>. Over a period of eight days, the fistula slowed and spontaneously stopped draining. Drains were then removed and he was placed on a normal diet, being dismissed on the 17th postoperative day doing very well, with good pulses in his feet and no evidence of infection at that time.

Forty-eight hours following discharge, the patient awoke at 8 a.m. with a numb, white and pulseless right foot, at which time the right limb of the graft could not be felt. He returned to the hospital and was again taken to the operating room where a thrombectomy was performed with the thrombus filling the entire size of the graft being removed. The arteriotomy was closed and the patient immediately developed pulses in the foot again. He was placed on Heparin and, surprisingly, the pulse remained present. He was then switched to prothrombin depressants (Coumadin), and has remained on anti-coagulant therapy since that time, continuing to have good pulses in his feet. The wounds have all healed up and he is now doing exceedingly well four years and five months postoperative with no evidence of sepsis and no further complications.

### Discussion

As far as can be ascertained, this is the first patient to have survived a ruptured mycotic abdominal aortic aneurysm<sup>1,2</sup>. Because this appeared primarily as a problem of sepsis, the diagnosis was certainly delayed. The point is emphasized by Szilagyi<sup>4</sup> that the "sealed" abdominal aortic aneurysm may present itself in an insidious fashion and that the diagnosis is frequently delayed until rupture or leakage occurs, as it did in this instance. Surgery is almost always performed in the contaminated field and placement of the graft is frequently associated with failure<sup>5</sup>. The patient

initially appeared septic and it is presumed that his aneurysm ruptured two to three weeks previous to admission and "sealed". It is also presumed that, from recurrent urinary tract infections, his sepsis secondarily involved the ruptured aneurysm and hematoma.

Once the aneurysm was encountered, it was obvious that sepsis was present, in view of the odoriferous area and the frank purulent drainage encountered upon cutting through the wall of the aneurysm itself. Cultures subsequently did confirm *Proteus*. We were faced at that time with the dilemma as to whether or not to ligate the aorta and place axillary femoral grafts or to bypass this in some other fashion, as has been recommended in various forms. We elected to clean the area and debride it, with irrigation and antibiotics. Following this, an aortic bifurcation graft was placed. The patient did extremely well with this.

Because of subsequent events—namely, that of development of aortic duodenal fistula despite all attempts to avoid this—our judgment was obviously incorrect. We were faced with the problem again and it was recommended that the patient have a definite ligation of his aorta and primary axillary femoral grafts as initially suggested by Blaisdell<sup>6</sup>. Also, the possibility of using autogenous vena cava, as recently reported by Keitzer and DeWeese<sup>7</sup>, might well have been entertained. If either of these procedures had been employed at the time the initial infection was found in the aneurysm, it is unlikely that the patient would have developed a subsequent aorta duodenal fistula. However, because we were alert to such a possibility when he developed massive gastrointestinal bleeding, he was brought immediately to the hospital and prepared for the operating room promptly after aortography was carried out. This did reveal pseudo-aneurysm formation shown on x-ray, but did not reveal any frank leakage into the duodenum. As has been reported, fortunately not all aortoenteric fistulae do bleed massively and may present themselves in an insidious fashion such as this.

Because of previous experience of obtaining proximal control in the area in which the graft had been previously placed, control was obtained through the chest and we feel this was of great importance in keeping blood loss at a minimum, although this can now be satisfac-

torily accomplished with the Fogarty aortic balloon. Also, another technical point which is of great importance in view of previous experience in trying to ligate the aortic stump was the innovation of using the stapling device to control the very friable aortic tissue which is extremely difficult to suture. In utilizing the stapling device, however this was completely closed with no difficulty.

It is also felt that long-term patency rate of the axillary femoral grafts is yet to be proven, and that this particular patient may require some form of re-vascularization with autogenous materials at a later date. However, at this time—four years and five months post-operative—he is doing very well. Why the patient's prosthetic graft thrombosed and remained patent while on anti-coagulant therapy is pure conjecture.

### Summary

This is the first patient to survive a ruptured mycotic abdominal aortic aneurysm. If the situation arises again, it is recommended that either primarily ligating the aorta and inserting axillary femoral grafts at that time or possibly using vena cava as autogenous replacement be performed as treatment. In this particular case, we violated the concept of placing a prosthetic graft in an obviously infected area. Comment is further made that if aorto-duodenal fistula is encountered, control should be obtained through the chest or with the Fogarty balloon and the stapling device is recommended for control of the aortic stump.

### Nonproprietary and Trade Names of Drugs

*Coumadin*—Sodium Warfarin

*Keflin*—Sodium Cephalothin

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# Ano-Rectal Surgery Following Vaginal Procedures†

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*Seventy-seven cases of combined ano-rectal and vaginal surgery are presented. Advantages of undertaking the procedure are discussed with emphasis on hospital stay, a growing problem in today's health care.*

**M**ULTIPLE surgical procedures under the same anesthetic have been performed since the early days of "safe" surgery. Especially in abdominal surgery, the surgeon has tended to combine such procedures and incidental appendectomy is almost routine whenever pelvic or abdominal laparotomy is undertaken. There is little doubt that the addition of a second procedure, even through the same incision, does add some degree of risk to the operation. Most surgeons, it is safe to say, feel that the slight added risk is minimal as compared to the overall advantages to the patient.

The combination of ano-rectal surgery with vaginal procedures has not been widely practiced, however and there are many gynecologists who strongly disapprove of it. In searching for the reasons underlying the refusal to consider the combined procedures even when demonstrated pathology indicates the need for both, one usually hears as reasons (1) the increase in morbidity, (2) the danger of infection and (3) the myth of "painful rectal surgery."

The study presented today, we believe, will disprove these contentions and hopefully, will encourage others to give serious consideration to the combined operation when indicated. There has been no demonstrable increase in the morbidity of cases submitted to major vaginal surgery when the ano-rectal operation was added; there has been no incident of vaginal infection attributable to the ano-rectal operation; and there has been no evidence that the addition of the ano-rectal surgery has resulted in the increased use of postoperative narcotics

in patients having major vaginal surgery. There is no doubt that improved techniques in the past 20 years have resulted in a marked diminution of postoperative rectal pain. It is regrettable that so many physicians continue to lend credence to that myth.

The combination of vaginal and ano-rectal procedures has been done with some regularity at St. Joseph Infirmary in Louisville for the past 15 years. The primary impetus came from both the proctologist and the gynecologist. It is obviously difficult to obtain a good functional result following hemorrhoidectomy in the patient who has a prolapse of the uterus and a large rectocele. It is also not unusual following hysterectomy and anterior-posterior repair in the multiparous woman for the hemorrhoids to prolapse and become thrombosed in the immediate postoperative period. These observations prompted the combination of the two procedures, sporadically at first and more frequently as time passed and more gynecologists recognized its advantages to the patient. In no instance has a patient expressed regret at having had both operations at the same time.

This study relates to a six-year period, 1965 through 1970, during which 77 patients were submitted to the combined procedures.

Table 1 lists the gynecologic procedures involved in these cases. Six patients underwent abdominal hysterectomy and were arbitrarily included in this study since they did not significantly alter any of the statistics to be subsequently shown. Most of the patients (55) underwent a vaginal hysterectomy and anterior-posterior repair. Sixteen patients had various minor gynecologic procedures.

The ano-rectal procedures (Table 2) included hemorrhoidectomy, fissurectomy, fistulectomy, proctoplasty, sphincteroplasty or a combination of two or more of these procedures.

There was no change in the technical aspects of either surgical procedure. As a rule, the vaginal operation was done first and the patient then redraped for the proctological procedure—

Table 1

GYNECOLOGIC PROCEDURES	
Vaginal Hysterectomy and AP Repair .....	55
Abdominal Hysterectomy .....	6
Anterior-Posterior Repair .....	2
Posterior Repair .....	5
Vulvectomy .....	1
Removal of Cervix and AP Repair .....	1
D & C and Conization .....	3
D & C .....	3
Excision of Bartholin Cyst .....	1

also done in the lithotomy position.

The postoperative care was essentially the same as required for vaginal surgery alone except for topical rectal medications and delaying the sitz baths until the second postoperative day. In a few instances there was a slight increase in the frequency of narcotic injections in the first 24 to 36 hours after surgery but, as a rule, the demand for pain medication during this period was no greater than when either procedure was done alone. After the first 48 hours, the need for a narcotic appeared to be related to the vaginal surgery and was at a level usually seen following these operations.

Most of the gynecologists in this area recommend a six-week period of disability following major vaginal surgery for patients employed outside the home. There has been no instance where disability has been prolonged for reasons attributable to the added rectal surgery.

Table 2

PROCTOLOGIC PROCEDURES	
Hemorrhoidectomy .....	56
Hemorrhoidectomy and Fissurectomy .....	9
Hemorrhoidectomy and Fistulectomy .....	2
Hemorrhoidectomy and Proctoplasty .....	6
Sphincteroplasty .....	1
Fissurectomy .....	1
Excision of Skin Tags .....	1
Hemorrhoidectomy; Fistulectomy; Sphincteroplasty ...	1

There remains then the question: Does the combination of major vaginal and ano-rectal surgical procedures result in prolongation of hospitalization? With the steadily increasing cost of health care a matter of interest to everyone, and the impact of hospital care on that escalation a well recognized fact, we should be concerned with measures which will help control those costs—so long as we do not jeopardize the high quality care of our patients.

In our proctologic practice, the average un-

complicated ano-rectal surgical case is hospitalized for five days.

In the series presented here, with combined gynecologic and ano-rectal procedures, (Table 3) the 77 patients were hospitalized for a total of 950 days, an average of 12.3 days. The shortest hospital stay was five days, for five patients, and the longest was for 28 days for a patient who experienced a prolonged period of inability to void.

Table 3

COMBINED PROCEDURES	
Total Number of Patients .....	77
Total Hospital Days .....	950
Average Days Per Patient .....	12.3
Longest Hospitalization (One Patient) .....	28
Shortest Hospitalization (Five Patients) .....	5

Table 4 shows that 12 patients with limited vaginal procedures were hospitalized an average of only 6.9 days, and if we consider only the D & C, with or without conization (Table 5), the hospital stay averaged 5.1 days.

The larger group of patients who underwent vaginal hysterectomy and anterior and posterior repair, and the ano-rectal procedure (Table 6) were confined a total of 756 days—an average of 13.7 days per patient. Invariably, the longer hospitalization appeared to be related to the patient's inability to void, a problem common to vaginal hysterectomy and anterior repair when performed alone, and usually attributed to trauma to the urethra and bladder. There is no evidence that the rectal surgery contributed to the urinary problem. The length of hospitalization of these 55 patients varied little, if any, from the average for vaginal hysterectomy and anterior-posterior repair alone.

Table 4

LIMITED VAGINAL PROCEDURES	
Posterior Repair .....	5
Excision of Bartholin Cyst .....	1
D & C .....	3
D & C and Conization .....	3
Total Patients .....	12
Total Hospital Days .....	83
Average Days Per Patient .....	6.9

Table 5

HOSPITAL STAY	
D & C .....	3
D & C and Conization .....	3
Total Patients .....	6
Total Hospital Days .....	31
Average Days Per Patient .....	5.16



Table 6

MAJOR VAGINAL PROCEDURES  
(Vaginal Hysterectomy and AP Repair)

Total Patients .....	55
Total Hospital Days .....	756
Average Days Per Patient .....	13.7

Since the preparation of the material for this study there have been 15 additional patients submitted to the combined gynecologic and ano-rectal operative procedures (during 1971). These patients were hospitalized a total of 148 days, for an average of 9.8 days per patient.

The reduction of the average hospital stay from 12.3 days to 9.8 days, we believe, can be attributed to the use of the suprapubic cysto-catheter—which has resulted in the earlier re-establishment of normal bladder function.

## Summary

In summary, we believe that the combination of major vaginal and ano-rectal surgical procedures, when indicated, deserves careful consideration by both the proctologist and the gynecologist. By correcting both problems at the same time, there is greater assurance of a good functional result; the patient is submitted to the risk of only one anesthetic; there is no appreciable increase in postoperative pain, in morbidity, or in disability; and no appreciable increase in hospitalization over major vaginal surgery alone—while obviating the necessity of a second hospitalization for the rectal procedure.

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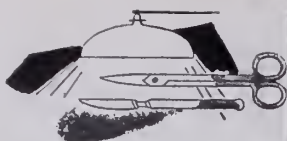
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# GRAND ROUNDS



The University of Kentucky College of Medicine

This Journal feature will be presented alternately by the University of Louisville and the University of Kentucky Departments of Medicine and Departments of Surgery. We hope to have these features revolve around subjects of immediate practical interest to the practicing physician; and, for those of us not able to attend grand rounds in the teaching centers as often as we might, we hope this will represent a bit of a refresher course.

## Intestinal Fistulae†

**M**ANAGEMENT of intestinal fistulae poses perplexing surgical problems. Such patients account for a disproportionate number of hospital bed-days with concomitant high patient costs and present diverse challenges requiring a multidisciplinary approach. An example of such a problem will be discussed today.

### Case Presentation

*D. M.*—This 36-year-old male was admitted to U.K.M.C. on May 22, 1973, with a diagnosis of a duodenal stump fistula. The patient had a long history of peptic ulcer disease complicated by bleeding and gastric outlet obstruction. Eight weeks prior to admission vagotomy and antrectomy with Bilroth II reconstruction was performed at another hospital. One week postoperatively a right upper quadrant fistula developed which was treated by insertion of drains at the site. Five weeks following his original procedure the patient was dismissed from the hospital with the fistula draining a moderate amount. Two weeks following discharge, the patient became markedly febrile and was readmitted. Local drainage of a right upper quadrant abscess was performed. Because of persistence of the fistula he was transferred to U.K.M.C.

Upon admission to U.K.M.C. physical examination revealed an emaciated, dehydrated male with normal vital signs and rectal temperature of 100 degrees. Abdominal distention and hypoactive bowel sounds were noted. A right upper quadrant fistula was draining small bowel contents. Admission laboratory data documented an hematocrit of 43%; WBC 17,900; BUN

7; Sodium 126; Potassium 3.4; Chloride 73; CO<sub>2</sub> 35. The initial week of his hospitalization was characterized by intermittent hypotension, renal failure, and sepsis. On May 29, 1973, the patient underwent celiotomy with drainage of pelvic and bilateral flank abscesses. The pelvic abscess required partial excision necessitating segmental small bowel resection. The moribund state of the patient precluded definitive treatment of the fistula.

By June 5, 1973, he weighed 85 pounds and was begun on oral feedings with an elemental diet (Vivonex). In mid-June intravenous hyperalimentation was begun and continued for the next six weeks. His weight gradually increased to 100 pounds. The output of the fistula continued to range from 800 cc to 2800 cc daily. On August 6, 1973, the definitive operation was performed. Retained gastric antrum was identified. The fistula exited from the stump of antrum, functioning as a blown duodenal stump. The residual antrum and the proximal duodenum were resected and the duodenal stump was closed. The remainder of the abdominal examination was normal. The patient's subsequent hospital course was uneventful. Since discharge from the hospital the patient has gained weight slowly to 100 pounds. He is eating a regular diet without restrictions, and is completely asymptomatic.

### Discussion

When investigating the etiology of intestinal fistulae one finds that the great majority of them are sequelae of previous operative procedures. Review of the literature documents that 70% to 98% of fistulae are secondary to previous operations. This has certainly been our experience at U.K.M.C.

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The causative factor most commonly cited is either intentional or unintentional enterotomy. The list of operative procedures preceding development of fistulae encompasses a wide range of abdominal procedures. Particularly prominent are gynecologic operations performed on previously irradiated patients. Among infrequent non-operative causes of intestinal fistulae are inflammatory bowel disease, particularly diverticulitis and regional enteritis; trauma, and neoplasm.

Diagnosis of gastrointestinal fistulae is usually easy. Drainage of intestinal contents through incisions or drain sites is *prima facie* evidence of a fistula.

Complications of intestinal fistulae can be placed into four major categories: (1) **Fluid and electrolyte depletion.** Fluid derangement can be quite marked. The patients may lose as much as 8,000 cc of body fluid daily, leading to marked dehydration and severe electrolyte imbalance. (2) **Inanition.** Patients with long standing intestinal fistulae suffer marked weight loss and have significant serum protein deficits. Negative nitrogen balance is compounded by preoperative and postoperative starvation, plus increased energy requirements during the postoperative period. (3) **Sepsis.** Sepsis may be secondary to peritonitis, intra-abdominal abscesses, urinary tract infections, or pulmonary infections. Renal failure and gastrointestinal bleeding are complications which frequently accompany sepsis. (4) **Skin digestion.** A major challenge is managing skin breakdown which often poses a severe problem in the management of the fistula itself and in the planning of subsequent abdominal procedures.

As a general rule, the more proximal a fistula is in the gastrointestinal tract, the more difficult it is to manage. This results from the greater fluid and electrolyte loss and the greater digestive capacity of the drainage from the fistula and the increased difficulty in excluding the higher portions of the GI tract. In addition, the loss of the proximal absorptive surface makes oral feeding less feasible.

The basic management of intestinal fistulae has been outlined by Dunphy and his associates in 1964 and again in 1971. This has been divided into four major priorities. The first of these should be undertaken in the initial 24 hours of the patient's hospitalization and involves several steps. Control of the fis-

tulous drainage and protection of the skin should be obtained by whatever mechanical means are necessary. This may require simple insertion of local sump drains into the area of the fistulous tract, or it may necessitate elaborate devices and diligent nursing care. Also, during this period of time, the initial evaluation of the patient's fluid and electrolyte status and hematologic picture should be obtained; initial steps are begun to correct any deficits present. Invariably these patients are chronically anemic and require blood transfusion despite laboratory values which are within normal limits. Readily accessible abscesses should be drained, preferably under local anesthesia.

Over the next few days the second priority of management should be undertaken. This constitutes continued correction of fluid and electrolyte derangements and the initiation of hyperalimentation via a central venous catheter. Some clinicians feel that hyperalimentation should not be begun if the patient is septic; others feel that the benefits outweigh the potential risks.

The third priority in management as outlined by Dunphy is delineation of the anatomy of the fistula. This is to be accomplished only when the patient is able to undergo the necessary diagnostic studies. This usually requires radiographic studies of the stomach, duodenum, small bowel, and colon. Injection of contrast material into fistula tracts greatly aids localization. Because of the complex nature of many of these fistulae and because of the adjacent intra-abdominal inflammatory processes, x-ray studies may have to be repeated on several occasions in order to obtain the information desired. Documentation of the presence or absence of bowel obstruction distal to the fistula is of paramount importance. The presence of obstruction necessitates prompt surgical intervention. Prolonged conservative management is discouraged in such a setting. During this period of time, if feasible, feedings of an elemental diet should be started via oral ingestion or tubes into the GI tract. Wolfe has demonstrated that the volume of fistulous drainage from the distal small intestine of a patient on an elemental diet is approximately 20% of that of a patient on a regular diet. Even greater decrease may be realized in patients maintained on parenteral alimentation. Maintenance of adequate nutrition with a goal of at least 3,000 calories daily is attempt-

ed. In the management of these patients the nutritional status correlates directly with eventual success. A retrospective analysis of patients with intestinal fistulae documents that maintenance of high caloric intake is the most outstanding characteristic distinguishing surviving from non-surviving patients. Survival and healing in the well-nourished patient is approximately three times more common than in those in whom high caloric intake cannot be maintained. If, at any phase during treatment, the patient is septic, in spite of what is felt to be adequate drainage, operative exploration is indicated to identify and drain occult abscesses.

If, in spite of optimal management, drainage persists, one must always consider the classic explanations for persistence of fistulous tracts: (1) distal obstruction; (2) foreign body, such as a stitch, sponge, or fecalith; (3) neoplasm, either previously recognized or undiscovered; (4) epithelialization of the fistulous tract; and (5) infection, such as an adjacent pyogenic or fungal abscess. Recognition of any of these factors or lack of improvement under careful management indicate the need for operative intervention.

Reports in the literature vary widely, but it appears that approximately one third of all fistulae will respond to conservative management and close spontaneously. Since no two cases are identical, the specific operative procedure should accommodate the problem which is encountered. Several helpful principles of operative technique deserve mention. Enter the abdominal cavity at a point away from the fistula and surround and isolate the fistula before attacking it directly. This may require an en bloc resection of a large area of bowel or may require painstaking delineation of uninvolved areas of intestine before approaching the primarily involved segments. If contrast studies have been anatomically specific it is sometimes beneficial to leave previously placed tubes in place as identification landmarks.

The results of treatment of intestinal fistulae vary somewhat in several reports, with mortality ranging from 15% to 40%. There is general agreement that conservative non-operative management carries a higher mortality than operative management. This discrepancy may reflect the moribund condition of some patients precluding operative intervention. A striking impact has been made in the last ten

years in the management of these patients by widespread employment of parenteral alimentation. This is emphasized by a comparison of the patients in Dunphy's two series seven years apart, with a mortality of 15% in the more recent series compared to 45% in his previous report. Sepsis is by far the most common cause of death, and sepsis due to fungal organisms is assuming increased importance in these patients. Other causes of death frequently encountered are renal failure, malnutrition, hemorrhage, and liver failure.

Because of the important role played by the use of parenteral alimentation in patients with intestinal fistulae, a few pertinent points deserve emphasis concerning the insertion and management of central venous catheters. Because of an excellent safety record in the hands of personnel at this hospital, we recommend the placement of the central venous catheter into the internal jugular vein rather than the subclavian vein as advocated by others. Complications related to the central venous lines can be divided into those related to placement of the line and those related to subsequent management of the catheters. The former category includes formation of local hematomas, induction of pneumothorax or pleural effusion, air embolism, arterial laceration or penetration, and embolization of a portion of the catheter. Among complications attributable to management of indwelling catheters are sepsis, air embolism, catheter embolization, intracardiac vegetations, pericardial tamponade, and thrombosis of major venous channels.

Several useful steps to prevent these complications should be observed: (1) meticulous surgical preparation of the puncture site prior to insertion of the catheter; (2) use of topical antibiotic solution at the puncture site; (3) careful dressing to the puncture site every other day; (4) removal of the central venous catheter when fever is unexpected or positive blood cultures are obtained; (5) prevention of catheter embolization by not withdrawing the catheter through the placement needle; (6) maintenance of a closed system to prevent air embolization; (7) employment of radiopaque catheters with routine chest x-rays to confirm position of the catheter; (8) exclusive use of the catheter for nutritional purposes, and (9) use of commercially available in-line filters.



We hope this brief review of intestinal fistulae and their management is helpful to all surgeons who encounter such challenging problems.

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CALVIN B. ERNST, M.D.

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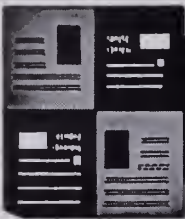
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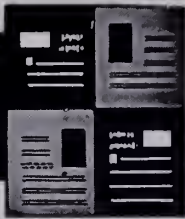
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## SPECIAL ARTICLES



### The Insurance Commissioner†

Robert E. Rinehimer\*

**I**N my address before the Blue Shield Annual Program Conference in Los Angeles last year, I reported that there appears in our local paper a daily column called, "The Cynic's Corner". One day an article appeared therein: "We note that Blue Shield received 32 guidelines. Its business must be becoming exceedingly more complex than life because God gave man only 10!" Indeed, our life has become more complex!

I would like to report to you today that since that time we have received additional guidelines—now we are up to approximately 50. Just as there are all styles of management, there are all types of regulations governing the Blue Shield Plans and all sorts of commissioners supervising them. In some areas, the commissioners are low key, but nevertheless truly effective. You all heard your Insurance Commissioner, Harold McGuffey, mention yesterday about the action which he took when he learned of a fly-by-night company that sold 10,000 policies within 10 days. He could have issued many news releases of what a great job he had done; yet you and I know that it is not the publicity that counts but rather the results of what action he takes. In other areas, it is a different story. Recently one commissioner in a New England state became so irate with the local Plan over its Board composition that he invited a Plan operating in another state to come across the state lines and do business. In another state, the commissioner is intrigued with the idea that a Plan should have no reserves. When the Plan got nine million dollars in the black, it was ordered to reduce its reserves by making more benefits available or having an open enrollment period.

In our own state of Pennsylvania, I am sure you have heard or read much about Commissioner Herbert S. Denenberg. He has appeared on the "Today" show two times. When he appeared the second time, Barbara Walters said that the show had not been able to catch up with the number of letters it received as a result of his first appearance. He has also appeared on the CBS "60 Minutes" show. Throughout our state, he has appeared on many local television stations. Last week, in Western Pennsylvania, there were four different tapes shown on the TV stations, each running 15 minutes. Thus, he had an exposure of one hour. He is frequently called to Washington, D. C. to testify before various Congressional committees. The title of his latest remarks given before Senator Ribicoff's Senate Subcommittee on Government Operations was "The Consumer Protection Agency: On the Merits of Governmental Cat Fights, Administrative Guerrilla Warfare, Bureaucratic Barbells, a Federal Circus Maximus, Foxes in the Federal Henhouse, Adversary Advocate, Wave Making and Boat Rocking."

Throughout his speeches and testimonies runs the theme, "More protection for the consumer." He has said repeatedly that every Insurance Commissioner should not hesitate to use the power of his office, the power of the press (or other public media) to give the consumer a fair shake in the field of health coverages and insurances. There have been 44 news releases about Pennsylvania Blue Shield since he came into office. His theme is: "Populous Iamdudum Defutatus Est" — freely translated: "The Consumer Has Been Screwed Long Enough." He has reiterated that the legislative process is too slow. Therefore, an insurance commissioner can expedite things by taking action administratively if he has public support.

†Presented at the 1973 KMA Interim Meeting, March 30, Lake Barkley State Park, Cadiz

\*Camp Hill, Pennsylvania. President, Pennsylvania Blue Shield.



With the aim of waking up the public and gaining its support, he has issued many shopper's guides: "How to Avoid Unnecessary Surgery", a "Guide to Life Insurance", and the latest one being a "Shopper's Guide to Dentistry". There are others as well. He has hounded, especially, certain commercial insurance companies for misleading advertisements and the issuance of gimmicky policies. Some of the policies have already been withdrawn from the market. He has issued guides to both the Blue Cross Plans of Pennsylvania and to us for making reforms, all of which have stirred controversy in various quarters.

What is a Plan (which serves 8,000,000 people) to do that comes under the supervision of an insurance commissioner who is flamboyant, arrogant, smart, incisive, and astute? To put things in perspective, I think you should know that our own Plan in Pennsylvania, according to our Enabling and Regulatory Acts, comes under the supervision of both the Secretary of Health and the Insurance Commissioner. With respect to the latter, the Commissioner has jurisdiction over all rates which we charge to subscribers, the form and content of all of our contracts, all the methods and rates of payment which we make to doctors, all acquisition costs in procuring subscribers, and the reserves to be maintained. If we were to go out of business, he would even preside over the dissolution. We can hardly do anything without his stamp of approval.

Although according to such Acts, we can in no way interfere with the diagnosis and method of treatment of subscribers by doctors; yet, on the other hand, there is a provision in our Acts that all services provided by or through Blue Shield shall be in accordance with the best medical practices in the community at the time. This particular provision is now beginning to receive more attention as the public begins to focus more on the aspect of the quality of health care. Blue Shield, in other words, thus becomes a vehicle through which the Commissioner hopes to effect reforms as he sees them.

One of the reforms he would like to see is an all-consumer Board of Directors. This has led to all sorts of legal snarls and to a donnybrook between him and the medical profession. Under our original Act, there was a requirement that the majority of the members of the Board had

to be doctors of medicine. This was only logical since the doctors spearheaded the organization of Pennsylvania Blue Shield in 1939. This provision drew little attention over the years until the wave of criticism began to come along. In the latter part of 1971, our State Legislature passed a bill which removed the requirement that the majority had to be doctors of medicine. The bill passed the Senate unanimously and the House by 180 to 16. It was not mandatory but rather permissive in nature. Nevertheless, the Commissioner asked us what we were going to do about it.

After an examination of the situation by our Special Study and Planning Committee, our Board recommended to the Corporation that the By-laws and our Charter be changed to allow us to add additional laymen. Our aim was to provide a Board composition of 50% doctors and 50% laymen. At the annual meeting of our Corporation last year, the matter came up for a vote. Sixty per cent were in favor of the change; however, our Charter has a requirement that approval of three-fourths of the entire membership is necessary to make such a change. There were not enough members present to make the change; consequently, a mail ballot was taken. But the requirement that three-fourths of the membership had to approve was not met. Prior to the annual meeting, the Medical Society had urged all our Corporate members to object to the proposed change. Frankly, I believe the Medical Society was not so mad about the proposed change, per se, but was mad about the Commissioner, who they felt had been vilifying or pillorying the entire profession in the press because of the actions of a few bad apples.

After our week-long public hearing last fall where all of this was aired, the Board of Trustees authorized the Pennsylvania Medical Society to write an open letter to the Governor demanding the ouster of the Commissioner. This action put Denenberg somewhat in a martyr role.

Now we come to the irony of life. During our hearing there was a consummation of some legislative activity. The Pennsylvania Bar Association's Law Research group had been preparing a 300-page document which proposed to codify or consolidate various non-profit corporation laws into one package. The laws governing Blue Shield were included in

this package which was identified as S-891. When this bill came out of Conference committee before the election recess last year, back in the bill was the requirement that the majority of our Board members had to be doctors of medicine. In November, the Governor announced that he had signed this bill, making it Pennsylvania Act No. 271. Thus, at the very moment, we are right back where we started. Consequently, now back in the Legislative hopper is another bill which seeks to eliminate again such requirement. It is still in Committee. When it will come out, I have no idea.

In spite of the Commissioner's statement that all Blue Shield members should be consumers, we still adhere to the position that an all-consumer Board is not feasible. On the other hand, I do think, in this date and age when our health care delivery system is involved with many economic, social and political issues, it is indeed advisable to have input from laymen. Moreover, as I have watched the laymen who are already on our Board become exposed to the problems with which you doctors in Blue Shield must deal, they have become the staunchest allies of the profession. It is my understanding that some time ago your very Association urged Kentucky Blue Shield to move toward a Board composition having 50% doctors and 50% laymen. In my opinion, this was excellent foresight upon the part of the Association. If action is not taken to gain more input from laymen, or consumers, then you can be sure there will be more input from the government sector.

Tied in to this matter of Board composition has been our request for a general rate increase. We haven't had one since 1961. Our underwriting losses last year amounted to about 10 million dollars. If we get no rate relief, we project that we could well lose 17 to 18 million dollars during this calendar year. In view of the Insurance Commissioner's regulatory powers which I have cited to you, you can see that a stalemate can easily occur. The Commissioner says, "You make the reforms as I have directed in my guidelines, then I'll consider a rate increase. If you don't, then you don't get one nickel." So this is the crunch in which we find ourselves.

Amidst a highly emotional climate, the doctors on our Board have acted with dignity

and restraint. The rhetoric was peeled away and the guidelines were examined for whatever merit they might have. Since our rate request was rejected last year, we again "set to" to develop another filing requesting rate relief. Last week we submitted our filing along with our responses to the guidelines. Let me cite a few of the guidelines and our responses:

- a. *Immediate changes in all committees of the board: Until such time as the by-laws and articles are changed to allow subscribers a voice in operations, committees of the board should have greater consumer representation, or majority control.*

At a meeting of the PBS Board of Directors on February 7, 1973, it was agreed that the Executive Committee of the Board would be expanded by adding three laymen so that such Committee will henceforth consist of equal numbers of professional and lay members.

It was further agreed that all standing committees of the PBS Board of Directors would be expanded so that each such Committee will henceforth include at least two laymen.

I might point out that even before we had this guideline, the composition of our Committees was structured in a manner depending upon their purpose. For example, for a long time our Finance Committee has had six laymen and one doctor; our Medical Policy Committee has had all doctors. Prior to this guideline, we had added a layman to our Dental Review Committee and to our Physicians' Review Committee. It was felt advisable that the laymen on our Corporation and Board should have an opportunity to directly experience the problems with which doctors wrestle in utilization review committees.

- b. *Blue Shield should require all participating physicians and dentists to obtain a minimum of hours of retraining each year to retain the right to participate. Similar requirements are now being developed for membership in the Pennsylvania Medical Society. This should be extended to Blue Shield participating doctors. It should also be made mandatory for licensing in Pennsylvania.*

Pennsylvania Blue Shield is not a licensing or certifying body. Such a requirement lies within the province of the licensing societies which are in a better position than Blue Shield to identify the educational needs and to pro-



vide remedial programs for both participating and non-participating doctors.

c. *Blue Shield should not pay for doctors who perform surgery for which they aren't qualified. Blue Shield should not pay any doctor who performs surgery for which he is not qualified. For example, operations of any complexity should be performed only by board certified surgeons, unless geographic shortages or emergency situations would prevent this.*

According to the Regulatory Act, PBS cannot be a certifying agency inasmuch as it cannot interfere with a choice of a physician by a subscriber-patient, or with the diagnosis and treatment of such patient. However, if Blue Shield were able to make a determination and not pay, the subscriber would lose a benefit to which he is rightly entitled since he would have to bear the cost of the service which had been performed. This responsibility, to determine professional qualifications, rests with the professional staffs of hospitals with, perhaps, assistance from the professional societies to foster education programs. PBS would be able to assist the committees by providing certain data on incidence of performance of surgical procedures by staff members and we could assist in the educational programs.

d. *Generic prescription of drugs: Blue Shield should require participating physicians to prescribe drugs generically where the potency and the adequacy of the generic equivalent is assured.*

Section 8 (b) of our Regulatory Act provides that PBS shall, "... impose no restrictions on the doctors of medicine, doctors of dental surgery, doctors of osteopathy or doctors of podiatry who administer to its subscribers as to methods of diagnosis or treatment."

The prescribing of drugs is certainly a clear part of "treatment" and we feel that to require participating doctors to prescribe only in generic terms would be a violation of this Act.

The supposition seems to be that the pharmacist is cognizant of and interested in cost control to the consumer, and that upon filling a prescription he will automatically select the least expensive brand of a given generic compound. Another supposition is that chemical formulations of the same compound are equal in their physiological effect and, therefore, the patient is spared unnecessary cost and will

receive the same therapeutic benefit if the pharmacist is the one who makes the final selection.

There are differences between brands of the same generic compound relative to absorption and side effects. The physician should be responsible for recognizing these differences in medications which he prescribes because he has a chance to get both objective and subjective feedback from his patients.

e. *Professional societies should encourage membership in Blue Shield. The Pennsylvania Medical Society, the Pennsylvania Osteopathic Association, the Pennsylvania Podiatry Association and the Pennsylvania Dental Association should actually encourage members to participate in Blue Shield. These organizations have often been silent on participation or have actually discouraged it.*

It would be helpful if all professional societies would encourage their members to become participating doctors of PBS, and we will approach professional societies to enlist their help.

(I might add here that we already have more than 18,000 participating doctors.)

f. *Blue Shield should survey subscribers. In the interest of innovative and cost saving methods of financing health care, Blue Shield should survey subscribers to determine problem areas and the best method of bringing about needed change. Blue Shield should also systematically survey those who use covered medical services to measure subscriber satisfaction or dissatisfaction.*

We will continue our efforts to survey our subscribers with respect to problems. We would like to point out, however, at present we are receiving feedback from our subscribers as a result of the following:

(1) Subscriber Service Departments at Camp Hill and in the Agent Plans through telephone calls, letters and personal interviews;

(2) The PBS Subscriber Advisory Council, an all-consumer group representing such bodies as labor, management, small and large Blue Shield groups, and the general public;

(3) Reports from our professional relations and utilization representatives;

(4) Our Ombudsman (Director of Consumer Relations) will devote full-time to insure

that any subscriber will have free access to a person concerned with resolving questions from and problems of our subscribers. Our Ombudsman has been working closely with the staff of the Insurance Department with respect to improving on-going educational efforts with our subscribers.

(5) Questionnaires sent out by our Internal Audit Department on a sampling basis; and

(6) The subscriber Notice of Payment sent out on every paid claim.

g. *Strict monitoring of physicians' fee programs: Blue Shield should strictly monitor physicians' profiles under the prevailing fee program:*

(1) *using physician records of subscribers in developing new profiles;*

(2) *checking office records of participating physicians to see if the doctor's claims to Blue Shield match his office records;*

(3) *requiring justification for increased charges rather than accepting requests for increases automatically;*

(4) *checking board certified doctors to see if they confine their practice to their specialty, in cases where this may have fee implications.*

Ever since the inception of the Prevailing Fee Program we recognized the need for monitoring. In connection with this effort, we have taken the following steps:

(1) Instituted the Charge/Payment Index;

(2) Developed a Profile Monitoring System;

(3) Accomplished prospective and retrospective payout studies to determine the impact of updating profiles;

(4) In addition, we will reinstitute the practice of showing the doctor's charge along with Blue Shield payment on the subscriber.

At the PBS Board meeting on February 7, 1973, it was agreed to amend the Blue Shield Participating Doctor Rules and Regulations to require a participating doctor to substantiate his usual charges of record as the most frequent charges to all patients by examining the doctor's office records. Further, if the examination of the doctor's records indicates that changes in his usual charges, established through his reported charges on PBS claims, are not valid, the information obtained during the examination of office records may be used to determine his usual charges of records at PBS.

h. *Broader utilization review on a prepayment basis: Blue Shield should move quickly to do more of its utilization review on a prepayment basis. It is considerably easier, less expensive and more effective to withhold payments to physicians when in question than to request refunds. Currently this is done for Medicare and should be expanded as quickly and thoroughly as possible to regular business.*

It appears to us that the Department has received the impression that prepayment in regular business has not been pursued as vigorously as that in Medicare. Actually, prepayment under Fee Schedule programs has existed for a long time but in different form: maximums were set for frequently performed procedures such as arthrocentesis and sigmoidoscopy. Also, there is a provision under Fee Schedule programs which states that a proctoscopy will not be paid for when it is performed within 30 days following an operation. However, the advent of the Prevailing Fee Program with its broader scope of coverage and the elimination of many restrictive factors found under the Fee Schedule programs, shifted the burden to a type of prepayment review similar to that used under Medicare. It must be pointed out that prepayment review is a viable program; parameters are instituted. After parameters are instituted, there must be a continual monitoring of their effectiveness which determines their retention or deletion, the need for further revision or the establishment of new ones.

Prepayment utilization review is performed in regular business as well as the Medicare Program, and claims are reviewed before the physician is paid. For the quarter July-September 1972, denials were as follows:

	Regular Business	Medicare
Claimant Ineligible	\$ 901,771	\$ 264,596
Services Not Covered	3,203,516	1,220,041
Medical Necessity Denials	330,875	897,377
Total Denials	\$4,436,162	\$2,382,014

i. *Explore alternate methods of reimbursing doctors: The Insurance Department Hearing on Health Care brought criticism of both the present Blue Shield Plan A and B fee schedule and the Prevailing Fee*



*Program. Blue Shield should consider the possibility of an alternate to these two methods of reimbursement such as a periodically negotiated fee schedule as suggested by Mrs. Anne R. Somers of the New Jersey College of Medicine and Dentistry at Rutgers.*

We are glad to have this endorsement, and we are exploring alternate methods, including but not limited to the following:

- (1) Health Maintenance Organizations; e.g., Geisinger Health Plan.
- (2) The concept of the Primary Care Program.
- (3) Payment by diagnosis.
- (4) New fee schedule; e.g., the one currently

being used for the Bell Telephone Company.

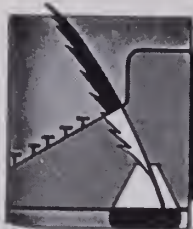
As you can see from all the foregoing, we have an entirely new setting — much of which is attributable to an insurance commissioner. The national publicity which he has received has resulted in Pennsylvania Blue Shield receiving national publicity. I anticipate that there will be national focus on any forthcoming public hearing that may be held by our Insurance Commissioner to discuss our request for a rate increase and our responses to his guidelines. In spite of the hot rhetoric to which we have been subjected, he nevertheless points out that commercial companies can't hold a candle to Blue Cross and Blue Shield; but he does expect us to be better performers than what we are.

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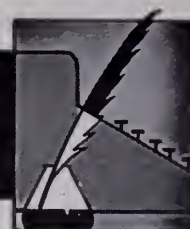
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## EDITORIALS



### NHI—One Possibility

How would you feel about a federally funded health insurance that:

a) covers 95% of our population with "catastrophic" benefits, beginning at 60 days' hospitalization or \$2,000 medical expense, and

b) replaces Medicaid with comprehensive, uniform medical benefits, for low income families only, and

c) establishes a "certification program" for private health insurance, to encourage development of policies with adequate coverage, eligibility, availability and reasonable pay-out ratio, and

d) requires "co-payment" of \$3.00 for each out-patient physician visit, under the low income portion of the plan, to control utilization, and

e) limits reimbursements to "reasonable cost" to institutions, and "reasonable charges" to practitioners, and

f) costs about \$9 billion dollars per year?

S 2513, the Catastrophic Health Insurance and Medical Assistance Act of 1973, has been introduced by Senators Long (D-La) and Ribicoff (D-Conn) together with 13 co-sponsors, and embodies the above features. The concept, it would seem, has much to recommend it. It appears designed to help the poor with most of their medical bills, and to help the rest of us obtain good coverage for our private insurance dollars. For those failing to obtain private insurance, or for those unfortunate enough to run up large medical obligations, the spectre of economic disaster would be obliterated by the "catastrophic" features of the plan. This feature alone would do much to lessen further

legislative pressure for a Kennedy-type ("let Uncle do it all") health plan, I believe.

Such a plan (S 2513) should be acceptable to those of us who believe each citizen should care for himself to the extent of his ability, with government aid for only those in need. We hear much these days of a "Partnership for Health," and it is important that all of us, professionals and patients alike, understand the need for us **all** to be involved in obtaining the health that we seek. In planning, in financing, in execution of any health plan, the patient himself **has** to bear (as he always has borne) a major share of the responsibility for his own well-being. Although many attempts are being made to "sell" health as a political entity, none of these "total" programs can ultimately succeed. The government cannot create health, no matter how severely it regulates physicians. Physicians cannot create health, no matter how shrill the voices demanding we do so. Management cannot buy health (for labor), no matter how sweet a contract is drawn. Health is, to a large extent, a matter determined by each individual. Any attempt on his part to shift that responsibility to others (i.e., physicians, government) is bound to fail.

S 2513, by assigning to the average patient the responsibility for financing his own health care, recognizes and reinforces a basic principle of a "Partnership"—that both partners need to contribute, toward a common goal. Some flaws it may have, but in the light of some of the other NHI legislation currently proposed, S 2513 certainly merits our consideration, and quite possibly our qualified support.

WIHj



## The Nitroblue Tetrazolium Dye Reduction Test

THE NBT reduction test as described in the current issue of *The Journal* is a simply performed test having as its main indication the differentiation of bacterial infection from non-bacterial diseases. As Morse<sup>1</sup> points out it seems possible that any phenomenon which will induce phagocytosis or activation of oxidative metabolism by neutrophils will result, to some degree, in an increased NBT reduction.

Conversely, metabolic abnormalities interfering with oxidation metabolism (chronic granulomatous disease, severe glucose-6-phosphate dehydrogenase deficiency, myeloperoxidase deficiency) or medications and chemicals interfering with phagocytosis or oxidative metabolism, will result in a reduced capacity of the neutrophil to reduce NBT.

It has been stated that the NBT test in both adults and children has a greater capacity to distinguish bacterial infection from non-bacterial inflammatory disease than such traditional indexes as temperature and white-cell

count. Interpretation of the test may be difficult if the patient is already on antibiotic therapy in that a negative result may occur after a few days of effective antibiotic therapy.

A not uncommon problem is the differentiation of the lymphomata from bacterial infection in instances of FUO. It has been reported that a positive test may be seen in Hodgkin's Disease rendering the test of questionable value when this problem exists. Additional occasional reports of positivity in acute hepatitis, malaria, and systemic fungal infection indicate that interpretation requires caution on the clinician's part.

Helpful modifications in the technical aspects of the test as presented by Raff and Brown are of benefit to laboratory personnel and indirectly to the clinician.

EDWARD J. FADELL, M.D.

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<sup>1</sup>Morse, Edward E.: CCE Check Sample Program in Hematology, No. H-62, (1973), American Society of Clinical Pathologists.

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### Notice To Contributors

Members of the Kentucky Medical Association reading papers before other organizations are asked to submit their papers to *The Journal* for consideration by the Editors for publication. Detailed instructions to contributors appear in the Scientific Section of *The Journal* under Manuscript Memos. Please forward any papers to:

Charles C. Smith, Jr., M.D., Scientific Editor  
The Journal of the Kentucky Medical Association  
3532 Ephraim McDowell Drive  
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## ORGANIZATION SECTION



### KMA House Names Dr. Gardner, Dr. Payne to Top Offices

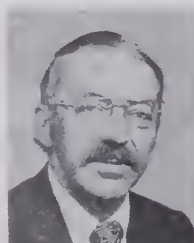
Hoyt D. Gardner, M.D., Louisville, was named KMA President-Elect for the 1973-74 Associational year by the House of Delegates at its September 19 session. Elected as Vice-President was Gabe A. Payne, Jr., M.D., Hopkinsville.



Doctor Gardner

A general surgeon, Doctor Gardner has been very active in KEMPAC and AMPAC, having served as Chairman of the Board of Directors of both organizations. He is currently Chairman for National Affairs of the KMA Legislative Activities Committee and was a member of the Building Committee and Senior Day Committee. In addition to his duties with the Association, he is President of the Medical Alumni Association at the University of Louisville.

Doctor Payne, a pediatrician, is the immediate past Chairman of the KMA Judicial Council. He served on the Board of Trustees from the Third District from 1962 to 1968 and served as its Vice-Chairman in 1962-63. A clinical instructor in pediatrics at Vanderbilt University, Doctor Payne is a former member of the KMA Legislative Activities Committee. He is Vice-Chairman of the Pennyriple Area Comprehensive Health Planning Council and a member of the Advisory Council for Health Facilities for Kentucky.



Doctor Payne

Re-elected to two-year terms as Delegates to the AMA were John C. Quertermous, M.D., Murray and David B. Stevens, M.D., Lexington and as Alternate Delegates, William W. Hall, M.D., Owensboro and Thomas L. Heavern, Jr., M.D., Highland Heights.

### Drs. Cassady, Parks Assume New Posts on KMA Board

Ballard W. Cassady, M.D., Pikeville, Fourteenth District Trustee, was chosen as Chairman of the

KMA Board at its first meeting on September 20. Named as Vice-Chairman was Paul J. Parks, M.D., Bowling Green.

A surgeon, Doctor Cassady succeeds Robert N. McLeod, Jr., M.D., Somerset, as Board Chairman.



Doctor Cassady



Doctor Parks

Doctor Cassady, a member of the Board of Trustees since 1966, served as Vice-Chairman last year. He is currently the President of the Kentucky Chapter, American College of Surgeons and belongs to the Kentucky Surgical Society and the Southeastern Surgical Association.

Doctor Parks, Trustee from the Sixth District since 1969, is in the practice of internal medicine. He is a past president of the Madison County and Warren County medical societies and is a past Chairman of the KMA Coordinating Commission on Governmental Medical Services.

Newly elected to the Board of Trustees were John P. Stewart, M.D., Frankfort, Seventh District, succeeding Thomas P. Leonard, Sr., M.D., Frankfort, and James L. Ferrell, M.D., Paris, Ninth District, succeeding J. Campbell Cantrill, M.D., Georgetown.

Charles C. Kissinger, M.D., Henderson, Second District; David A. Hull, M.D., Lexington, Tenth District; and J. Wesley Johnson, M.D., Ashland, Thirteenth District, were each re-elected to a three-year term as Trustee.

Alternate Trustees newly elected are: William H. Keller, M.D., Frankfort, Seventh District, and Don R. Stephens, M.D., Cynthiana, Ninth District.

Re-elected as Alternate Trustees were Kenneth M. Eblen, M.D., Henderson, Second District; Irving F. Kanner, M.D., Lexington, Tenth District; and Arthur B. Richards, M.D., Louisa, Thirteenth District.

**Complete Digest of Proceedings  
of House of Delegates  
in  
December Issue**



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# The irritations of man's day are often reflected in his gut.

The causes of irritable colon and the diarrheal symptoms that often accompany it can be as diverse as the systemic and emotional irritations man is faced with daily.

Although the mucoid nature of stools and the occurrence of diarrheal episodes coincident with times of emotional stress may be valuable clues to the functional nature of the disorder, irritable colon must often be diagnosed by exclusion. Such diagnostic exploration takes time. Discovery of the nature of any emotional problems may take more. During that time, Lomotil® is an ideal agent for controlling diarrheal symptoms.

Lomotil tablets are small, easy to carry and easy to take. They act promptly and effectively. Secondary effects are relatively infrequent and, once the first force of the diarrhea is controlled, maintenance is frequently effective on as little as one fourth of the initial dosage.

These same characteristics make Lomotil useful in controlling the diarrhea associated with gastroenteritis, antibiotic therapy and acute infections.





**IMPORTANT INFORMATION:** This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.

**Indications:** Lomotil is effective as adjunctive therapy in the management of diarrhea.

**Contraindications:** In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

**Warnings:** Use with caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis.

**Usage in pregnancy:** Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

**Precautions:** Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage.

**Adverse reactions:** Atropine effects include dryness of skin and mucous membranes, flushing and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria and paralytic ileus.

**Dosage and administration:** Lomotil is contraindicated in children less than 2 years old. Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

**Overdosage:** Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. Use a narcotic antagonist in severe respiratory depression. Observation should extend over at least 48 hours.

**Dosage forms:** Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. Liquid, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of 1/2 ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

# Lomotil®

## TABLETS/LIQUID

Each tablet and each 5 ml. of liquid contain:  
diphenoxylate hydrochloride . . . 2.5 mg.  
(Warning: May be habit forming)  
atropine sulfate . . . . . 0.025 mg.

takes care of the gut issue  
in irritable colon

SEARLE

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## Placidyl® (ETHCHLORVYNOL)

### Brief Summary

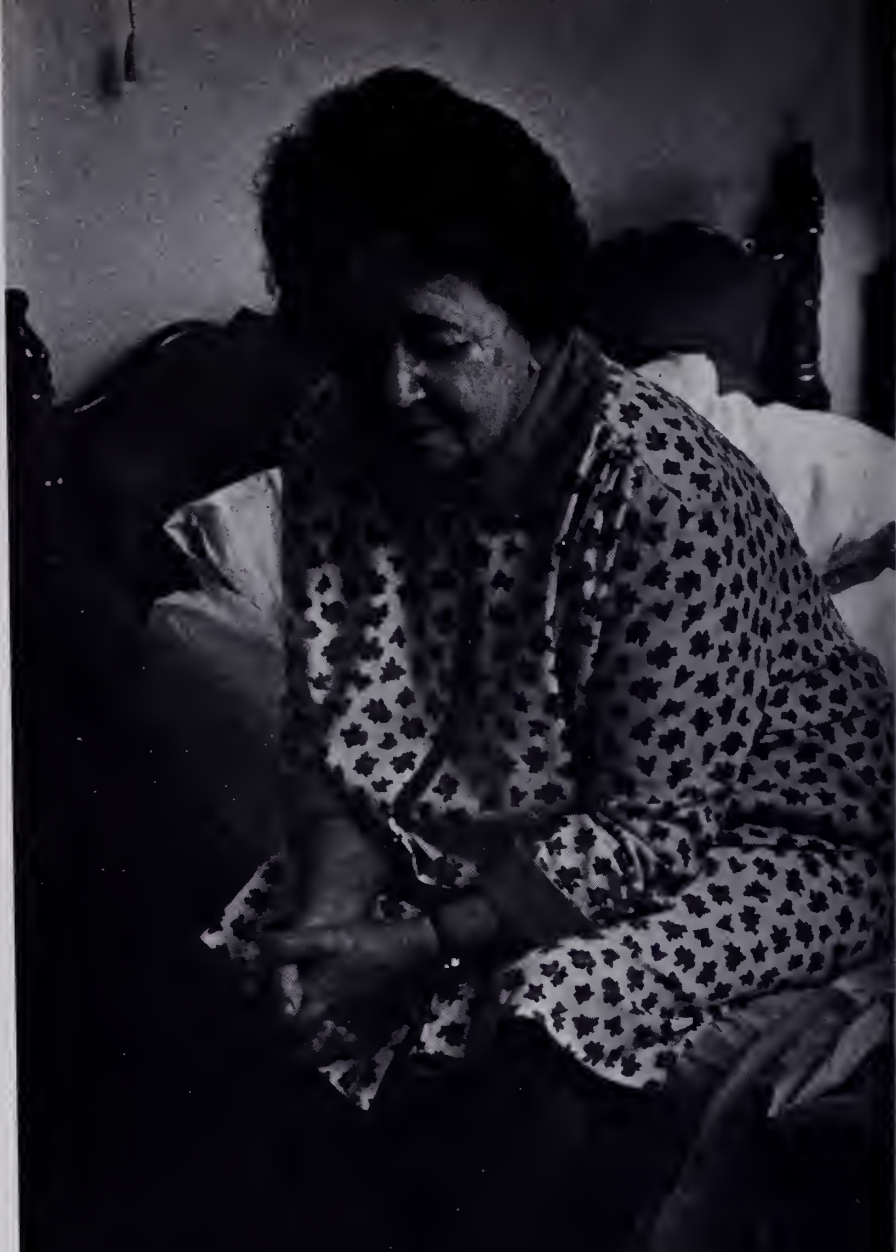
**Indications**—Placidyl (ethchlorvynol) is indicated as short-term hypnotic therapy in the management of insomnia.

**Contraindications**—Drug hypersensitivity and porphyria.

**Warnings**—Not recommended during the first and second trimester of pregnancy. Caution patients of possible combined exaggerated effects with alcohol, barbiturates, tranquilizers or other CNS depressants. Exaggerated effects might result in blurring of vision, paralysis of accommodation and profound hypnosis. Caution patients concerning driving a motor vehicle, operating machinery, or other hazardous operations requiring alertness after taking the drug. ADMINISTER WITH CAUTION TO PATIENTS WITH SUICIDAL TENDENCIES AND DO NOT PRESCRIBE LARGE QUANTITIES OF THE DRUG. Adjustment of the dosage of oral anticoagulants might be necessary when beginning ethchlorvynol therapy, during therapy, or after stopping therapy. This drug is not recommended for use in children. PLACIDYL HAS THE POTENTIAL FOR THE DEVELOPMENT OF PSYCHOLOGICAL AND PHYSICAL DEPENDENCE. INSTANCES OF SEVERE WITHDRAWAL SYMPTOMS, INCLUDING CONVULSIONS AND DELIRIUM CLINICALLY SIMILAR TO THOSE SEEN WITH BARBITURATES, HAVE BEEN REPORTED IN PATIENTS TAKING REGULAR DOSES AS LOW AS 1000 MG. PER DAY OVER A PERIOD OF TIME WHEN THE DRUG WAS SUDDENLY DISCONTINUED. PROLONGED ADMINISTRATION OF THE DRUG IS NOT RECOMMENDED. Addiction-prone patients or those who are likely to increase dosages of the drug on their own initiative should be observed for evidence of signs or symptoms which may indicate possible early withdrawal or abstinence symptoms. Signs and symptoms associated with withdrawal and abstinence include unusual anxiety, tremor, ataxia, slurring of speech, memory loss, perceptual distortions, irritability, agitation and delirium. Other less well defined signs and symptoms, not necessarily due to withdrawal and abstinence, may include anorexia, nausea or vomiting, weakness, dizziness, sweating, muscle twitching and weight loss. Abrupt discontinuance of Placidyl following prolonged overdosage may result in convulsions and delirium.

**Precautions**—Toxic amblyopia has been reported with long-term continuous use of ethchlorvynol. Permanent visual defects have been observed, although amblyopia has improved after discontinuation of the drug. Drug dosage should be limited for elderly and debilitated patients to the smallest effective amount. If pain is present, this drug should only be given if insomnia persists after pain is controlled with analgesics. Caution is advised in prescribing the drug for patients who are being treated with either MAO inhibitors or antidepressants. Transient delirium has been reported with the combination of Placidyl and amitriptyline. Drug dosage should be reduced if prescribed for patients receiving MAO inhibitors or antidepressants. Caution should be exercised in patients with impaired hepatic or renal function. Patients who respond unpredictably to barbiturates or alcohol, or who exhibit excitement and release of inhibition in association with such agents, may also react in this way to Placidyl. Rarely, patients may exhibit symptoms suggestive of an unusual susceptibility to the drug; such as prolonged hypnosis, profound muscular weakness, excitement, hysteria, or syncope without marked hypotension. Transient giddiness or ataxia may occur.

**Adverse Reactions**—Hypotension, nausea or vomiting, gastric upset, aftertaste, blurring of vision, dizziness, facial numbness, and allergic reaction typified by urticaria have been reported following Placidyl administration. Mild "hangover" and symptoms of mild excitation have occurred in some patients. There have been rare reports of cholestatic jaundice occurring in patients taking ethchlorvynol. A few cases of thrombocytopenia have been reported in patients receiving ethchlorvynol. 305432



## Give us her nights.

Prescribe Placidyl. Chances are, we'll give her a good night's sleep.

Insomnia is often suffered by the elderly. Anxiety and agitation might be the cause. Or the effect. In time that can be determined. But tonight one fact is painfully clear: she needs sleep.

When sleep is synonymous with therapy, remember . . . Placidyl is synonymous with sleep. It has been for over 17 years.

If time is the criterion to inspire your confidence . . . you can rest assured with Placidyl.

Prescribed by physicians for over 17 years.

## Placidyl®



(ETHCHLORVYNOL CAPSULES, 500 or 750 mg.)



## Dr. Clardy, Mr. Koon Honored At KMA President's Luncheon

Delmas M. Clardy, M.D., Hopkinsville, and John W. Koon, Louisville, were recipients of the 1973 KMA awards. Doctor Clardy was presented the Distinguished Service Award and Mr. Koon, the Kentucky Medical Association Award, at the President's Luncheon, September 19. Richard F. Grise, M.D., Bowling Green, Chairman of the Awards Committee, made the presentations.

Honored for his "outstanding and dedicated service to the medical profession and this Association," Doctor Clardy, a surgeon, has been an active member of KMA since 1934. He served as a Trustee from the Third District for six years, as KMA Treasurer for five years, and as President of the Association in 1964-65. Doctor Clardy is at present serving on the Board of Directors of Kentucky Physicians Mutual, Inc., as its Vice-Chairman.

Mr. Koon, honored for his accomplishments in the field of health as a layman, has been Executive Secretary of the Kentucky Farm Bureau Federation since 1955. Active in various civic organizations, Mr. Koon is also a member of the KPM Board of Directors and serves on the Comprehensive Health Planning Council. He supports KMA in several functions, including membership on the Board of Trustees of the Rural Kentucky Medical Scholarship Fund.

In addition to the awards presentations, the President's Luncheon featured a humorous address on the functions of the United States Pharmacopeial Convention by Mr. Robert H. Henry, U.S.P. Director of Professional Affairs.

Robert N. McLeod, Jr., M.D., Somerset, Chairman of the Board of Trustees, administered the oath of office to Fred C. Rainey, M.D., Elizabethtown, KMA President.

## Auxiliary Elects Mrs. McElvein, Installs Mrs. Pearson

Mrs. Richard B. McElvein, Lexington, was chosen as President-Elect of the Woman's Auxiliary to KMA, during the Annual Convention of that organization September 17-19 in Louisville. Installed as President for the 1973-74 Associational year was Mrs. William E. Pearson, Owensboro. Mrs. Pearson succeeds Mrs. George Schafer, Louisville, who presided at the meeting.

Other new officers of the Auxiliary for the upcoming year are: Third Vice-President, Mrs. Tom Hall, Bowling Green; Corresponding Secretary, Mrs. Kenneth Westerfield, Owensboro; and Parliamentarian, Mrs. J. Murray Kinsman, Louisville.

## 1974 Nominating Committee Elected by Delegates

Members of the KMA House of Delegates elected five physicians to serve on the 1974 Nominating



Fred C. Rainey, M.D., (right), KMA President, shakes hands with Governor Wendell H. Ford in Frankfort at the onset of the three-day Kentucky Chamber of Commerce Governor's Tour through Eastern Kentucky. Doctor Rainey and Mr. Robert G. Cox, Executive Director of KMA, represented the Association on the annual tour.

Committee at its final session September 19. This committee is responsible for presenting a slate of candidates for all elective offices within the structure of the Kentucky Medical Association to the House of Delegates at the 1974 Annual Meeting.

The committee members chosen were: Leslie W. Blakey, M.D., Lexington; Peter P. Bosomworth, M.D., Lexington; W. Neville Caudill, M.D., Louisville; Wyatt Norvell, M.D., New Castle; and Jim B. Tolliver, M.D., Whitesburg.

## 1973 KMA Orientation Program Attended by 17 Physicians

Seventeen physicians attended the 14th KMA Orientation Program held September 19 during the 1973 KMA Annual Meeting, according to Wyatt Norvell, M.D., New Castle, Chairman of the KMA Orientation Committee.

Held on a voluntary basis for the second time, the program included a slide presentation and a question and answer period. Physicians who attended the 1973 session are listed below.

Joseph D. Alter, M.D., Louisville  
Philip R. Curd, M.D., McKee  
Jorge Garrastazu, M.D., Greenville  
Jerry L. Gibbs, M.D., Bowling Green  
Muharrem Gultekin, M.D., Louisville  
Robert D. Hendren, M.D., Lebanon Junction  
Nicholas R. Jurich, M.D., Prestonsburg  
Upen J. Kharod, M.D., Louisville  
Suk Kyung Koh, M.D., Springfield  
Irfan Kucukcetin, M.D., Louisville  
John D. McGavic, M.D., Louisville  
B. Gary Marquardt, M.D., Louisville  
Cecil D. Martin, M.D., Carrollton  
Robert W. Morrissey, M.D., Louisville  
Joseph L. Thompson, M.D., Louisville  
Gerald Verdi, M.D., Louisville  
David Winkle, M.D., New Castle

## Delegates' Actions on 44 Reports and 17 Resolutions Summarized for 1973 KMA Annual Meeting

The House of Delegates of KMA reviewed and took action on 44 reports and 17 resolutions submitted to them at this year's Annual Meeting, September 18-20. Reference committees heard testimony on the reports and resolutions on Monday, September 17 and the House took final action on Wednesday, September 19.

Some of the actions taken are as follows:

**Abortion Guidelines.** The reference committee studied a resolution from the Board of Trustees and from the Campbell-Kenton County Medical Society and a substitute resolution was introduced which provided that KMA is in no way to be construed as implementing, condoning or approving abortions at any state of unborn human development, but wanted to express the determinations of the House of Delegates to provide protection for the life of the unborn child whenever possible. A report addressing itself to medical guidelines was also approved.

**Professional Standards Review Organization.** Much attention was directed to PSRO's, and a resolution was approved supporting a statewide PSRO concept for Kentucky and authorizing the Foundation, organized by KMA, to enter into a provisional contractual agreement to serve PSRO purposes. The resolution also asked that the public and legislators be informed of the potential deleterious effects of the law and requested that Congress repeal it.

**Continuing Education.** Mandatory aspects of continuing education are being studied while the House requested establishing a system for accrediting regional educational centers this year and to seek AMA accreditation for the system.

**Spring Meeting of the House of Delegates.** The Fayette County Medical Society submitted a resolution urging a spring meeting of the House of Delegates. It was felt that such considerations as the cost factor, attendance, etc., would be significant potential problems. The House approved referral of the resolution to the Interim Meeting Study Committee for further discussion.

**Legal Trust Fund.** The House of Delegates voted to set up a legal trust fund by assessing each KMA member \$3 per year which would "support the legal efforts of any active KMA member to effect change of or gain redress from legislation, governmental regulations or 'third party' policies which, subject to the stipulations below, adversely affect the practice of medicine, patient protection or physicians' rights either as individuals or professionals. . . ."

**Interns and Residents.** The Jefferson County Medical Society submitted a resolution regarding representation in the House of Delegates for residents and interns. The reference committee recommended a substitute resolved be added which read as follows: "Be it resolved that the KMA and component societies develop recommendations for the appropriate role and opportunity for students, interns and residents in the organizations following consultation with representatives for these groups." The House of Delegates instructed the Board of Trustees to bring recommendations on this matter to the 1974 meeting of the House.

This is a very brief summary of some of the actions taken during the 1973 Annual Meeting. All of the reports and resolutions acted upon by the KMA House of Delegates will be published in the December issue of *The Journal*.




Board members pose with guest speakers following the annual KEMPAC Seminar on Monday evening, September 17. Pictured from left to right are: Cecil L. Grumbles, M.D., Louisville, KEMPAC Treasurer; Lee C. Hess, M.D., Florence, Immediate Past President of KMA; Mark Russell, Washington, D.C., entertainer; Mrs. Hoyt D. Gardner, Louisville, KEMPAC Vice-Chairman; Carl Cooper, Jr., M.D., Bedford, KEMPAC Chairman; Mrs. William E. Pearson, Owensboro, KEMPAC Secretary; and Bennett L. Crowder, II, M.D., Hopkinsville, Assistant Treasurer of KEMPAC.



# Integument!

Our skin—the human integument—covers us, defines us, protects us. But skin is subject to cuts, burns, abrasions. And infections. Neosporin Ointment fights infection by providing broad antibacterial action against susceptible skin invaders. It contains antibiotics that are rarely used systemically, reducing the risk of sensitization.



**INDICATIONS:** *Therapeutically*, used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

*Prophylactically*, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

**CONTRAINDICATIONS:** Not for use in the external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

**PRECAUTION:** As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Complete literature available on request from Professional Services Dept. PML.

## NEOSPORIN<sup>®</sup> Ointment

(POLYMYXIN B-BACITRACIN-NEOMYCIN)

Each gram contains: Aerosporin<sup>®</sup> brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg. (equivalent to 3.5 mg. neomycin base); special white petrolatum q.s. In tubes of 1 oz. and ½ oz. and ¼ oz. (approx.) foil packets.



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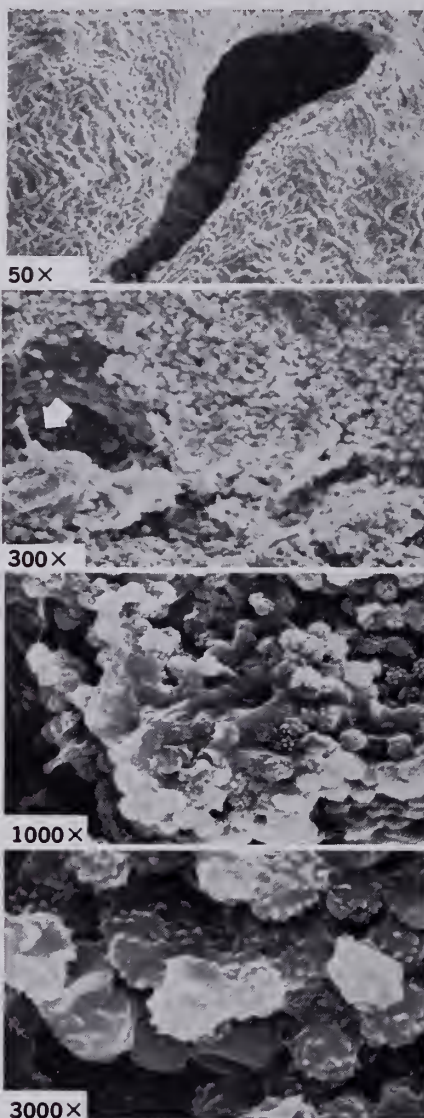
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Research Triangle Park  
North Carolina 27709



# Progress in Diagnosis

In these illustrations of tissue from a patient with acute cystitis, you can see the swollen and inflamed mucosa of the ureteral orifice (50×), a fibrin strand (300×), and a whitish exudate composed of polymorphonuclear leukocytes (1000× and 3000×). The photographs were taken with the scanning electron microscope (SEM) by Dr. Shirley Siew, Associate Professor of Pathology at the University of Pittsburgh School of Medicine. They come from the clinical exhibit "Scanning Electron Microscopy of Urinary Tract Infection," which won first prize in Clinical Research at the May 1972 meeting of the American Urological Association.

The scanning electron microscope promises to be extremely useful in its investigation of human pathology. In time, examination of tissue with the SEM is likely to play a significant role in the diagnosis of urinary tract infection.



## A note on the photography:

These photographs were made by the scanning electron microscope, which, like the transmission electron microscope, operates on the basic principle of exposure of tissue to a beam of electrons in a vacuum. With the SEM, electrons bombard the surface of tissue which has been given a fine coating of gold. The electrons reflect off the tissue onto a television screen, and the resulting photograph shows a three-dimensional effect. The tissue sections need not be ultrathin, so there is a minimum of handling and distortion.

Just as much an instrument of progress and just as helpful in its way has been Gantrisin (sulfisoxazole) Roche, developed and introduced a generation ago. However, there's been no generation gap over its continuing usefulness. In fact, Gantrisin, with so many years of clinical experience behind it, is still one of the most valuable drugs we have for the treatment of non-obstructed cystitis, pyelitis or pyelonephritis due to susceptible organisms such as *E. coli*. Specifically, Gantrisin provides your patient with certain important therapeutic advantages:

**References:** 1. Bran, J. L.; Karl, D. M., and Kaye, D.: *Clin. Pharmacol. Ther.*, 12:525, 1971. 2. Burke, E. C., and Stickler, G. B.: *Mayo Clin. Proc.*, 44:318, 1969. 3. Hibbard, L. T., in Bulger, M. J., et al.: *Patient Care*, 1:(3) 47, 1967. 4. Holloway, W. J.; Furlong, J. H., and Scott, E. G.: *J. Urol.*, 102:249, 1969. 5. House, T. E., et al.: *Obstet. Gynecol.*, 34:670, 1969. 6. Lampe, W. T.: *J. Am. Geriatr. Soc.*, 16:798, 1968. 7. Moffat, N. A., and Wenzel, F. J.: *Curr. Ther. Res.*, 13:286, 1971. 8. Normand, I. C. S.: *Practitioner*, 204:91, 1970. 9. Pyles, C. V.: *Med. Clin. North Am.*, 54:1077, 1970. 10. Seneca, H.; Peer, P., and Warren, B.: *J. Urol.*, 99:337, 1968. 11. Trafton, H. M., and Lind, H. E.: *J. Urol.*, 101:392, 1969. 12. Cohen, M.: *Pediatrics*, 50:271, 1972.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Nonobstructed urinary tract infections (mainly cystitis, pyelitis, pyelonephritis) due to susceptible organisms. **IMPORTANT NOTE:** *In vitro* sensitivity tests not always reliable; must be coordinated with bacteriological and clinical response. Add aminobenzoic acid to follow-up culture media. Increasing frequency of resistant organisms limits usefulness of antibacterial agents, especially in chronic and recurrent urinary infections. Maximum safe total sulfonamide blood level, 20 mg/100 ml;

measure levels as variations may occur.

**Contraindications:** Hypersensitivity to sulfonamides; infants less than 2 months of age; pregnancy at term and during the nursing period.

**Warnings:** Safety in pregnancy not established. Do not use for Group A beta-hemolytic streptococcal infections, as sequelae (rheumatic fever, glomerulonephritis) are not prevented. Deaths reported from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias. Sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. CBC and urinalysis with careful microscopic



# acute cystitis:

## Treatment

**high urinary levels** As a urinary antibacterial, Gantrisin (sulfisoxazole) offers your patients important advantages. Therapeutic urinary and plasma concentrations are usually reached in from 2 to 3 hours and can be maintained on the recommended 4 to 8 Gm/day dosage schedule that's convenient for almost all patients.

**generally good tolerance** Gantrisin causes relatively few undesirable reactions, and serious toxic reactions are rare. Minor reactions are comparatively infrequent, but may include nausea, headache and vomiting. Hence, Gantrisin may usually be given even for extended periods when treating chronic or recurrent nonobstructed cystitis, pyelitis or pyelonephritis due to *E. coli* and other susceptible organisms. (See Important Note in summary of prod-



uct information.) Complete blood counts and urinalyses, with careful microscopic examination, should be performed frequently.

**high solubility** Gantrisin (sulfisoxazole) Roche is one of the most soluble of all sulfonamides, with both free and acetylated forms highly soluble in the commonly encountered urinary pH range of 5.5 to 6.5. Urine levels have been detected in

60 minutes; therapeutic levels are usually reached in from 2 to 3 hours. About 90% of a single dose is excreted in 24 to 48 hours. As with all sulfonamides, adequate fluid intake must be maintained.

**economy** Average cost of therapy is still only about 6½¢ per tablet.

**total therapy: 14 days** Recent evidence in the medical literature suggests that therapy in acute non-obstructed urinary tract infections should be continued for 10 to 14 days even if patients become asymptomatic in 2 or 3 days; as they often do.<sup>1-11</sup> However, one investigator, evaluating a 5-year study of sulfisoxazole used to treat urinary tract infection in 368 girls, found no advantage in continuing therapy more than two weeks *for a first infection*.<sup>12</sup>

**For acute, chronic or recurrent nonobstructed cystitis, pyelitis, or pyelonephritis due to susceptible organisms...**

begin with  
**Gantrisin<sup>®</sup>**  
**sulfisoxazole/Roche<sup>®</sup>**

**Usual adult dosage:** 4 to 8 tablets *stat*  
2 to 4 tablets *q.i.d.*

examination should be performed frequently.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, severe allergy or bronchial asthma. Hemolysis, frequently dose-related, may occur in glucose-6-phosphate dehydrogenase-deficient patients. Maintain adequate fluid intake to prevent crystalluria and stone formation.

**Adverse Reactions:** *Blood dyscrasias:* agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia; *Allergic reactions:* erythema multiforme (Stevens-Johnson

syndrome), generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis; *Gastrointestinal reactions:* Nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis; *C.N.S. reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia; *Miscellaneous reactions:* Drug fever, chills and toxic nephrosis with oliguria and anuria. Periarteritis nodosa and L.E. phenomenon have occurred. Due

to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

**Supplied:** Tablets containing 0.5 Gm sulfisoxazole.



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
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## COMPARATIVE REGISTRATION FIGURES

### KMA Annual Meeting

	Louisville 1964	Louisville 1965	Louisville 1966	Louisville 1967	Louisville 1968	Louisville 1969	Louisville 1970	Louisville 1971	Louisville 1972	Louisville 1973
KMA Members	924	1172	1016	957	1009	1056	1013	1186	940	929
Guest Physicians	157	138	195	152	153	149	130	149	142	138
Interns-Residents	108	132	121	94	103	95	101	70	119	103
Medical Students	128	193	209	222	185	218	245	233	234	234
Registered Nurses	34	27	33	24	42	27	48	30	41	61
Exhibitors	297	297	312	272	256	305	280	269	241	240
Guests	125	172	126	115	324	339	379	356	364	405
Technicians										
Office Assistants	61	55	46	31	29	39	32	36	34	30
TOTAL ATTENDANCE	1844	2186	2058	1867	2111	2228	2228	2329	2115	2140

### Guests and Speakers Praise 1973 KMA Annual Meeting

"This is simply a note to tell you how much I enjoyed the privilege of being on your program at your meeting of the Kentucky Medical Association.

*Jack Wickstrom, M.D.*

*Professor of Surgery*

*Tulane University School of Medicine*

*New Orleans, Louisiana*

"I greatly enjoyed my visit at your recent meeting in Louisville. I feel there is much great mutual benefit to be gained by our organizations through the continued exchange of ideas by these visitations."

*A. Thomas McCoy, M.D.*

*President*

*West Virginia State Medical Association*

*Charleston, West Virginia*

"I thoroughly enjoyed talking to your fine audience, and was very much pleased with their and your hospitality and friendliness."

*Roscoe E. Miller, M.D.*

*Professor of Radiology*

*Indiana University School of Medicine*

*Indianapolis, Indiana*

"I want to tell you how much I enjoyed the 'bang up' meeting that you all put on. I enjoyed the scientific program, attending several of these, as well as enjoying the appearance before the general session. It was indeed a rare treat to be associated with such wonderful people."

*James Lewis Pipkin, M.D.*

*Clinical Professor of Dermatology*

*University of Texas Medical School*

*San Antonio, Texas*

### ACS Awards Fellowships To 23 Ky. Surgeons

Twenty-three Kentucky surgeons were among the 1,675 physicians inducted as new Fellows of the American College of Surgeons during the Annual Clinical Congress of the group held last month. This was the largest number of surgeons ever to be inducted in the history of the College.

The Fellowship degree is awarded to those surgeons who fulfill comprehensive requirements of acceptable medical education and advanced training as specialists in one of the branches of surgery, and who give evidence of good moral character and ethical practice.

Those receiving this distinction from Kentucky are:

Waheed Ahmad, M.D., Louisville  
William G. Begley, II, M.D., Bowling Green  
Wilbur C. Blount, M.D., Lexington  
W. Michael Bryant, M.D., Lexington  
Bennett L. Crowder, II, M.D., Hopkinsville  
Charles K. Davis, Jr., M.D., Paducah  
John E. Downing, M.D., Bowling Green  
Edward C. Graves, M.D., Louisville  
Patrick F. Hagihara, M.D., Lexington  
Jeff Johnson, M.D., Paducah  
Carl W. Liebert, Jr., M.D., Louisville  
Willis P. McKee, Jr., M.D., Frankfort  
William J. Mersch, M.D., Covington  
William T. Moore, M.D., Bowling Green  
Jagdish Patil, M.D., Lexington  
R. Herman Playforth, M.D., Lexington  
John A. Reeves, M.D., Erlanger  
Jim L. Rogers, M.D., Madisonville  
Sheldon B. Schiller, M.D., Louisville  
A. Bert Sparrow, M.D., Louisville  
Joseph T. Walls, M.D., Hopkinsville  
Bruce R. Wolff, M.D., Morehead  
John Wright, M.D., Elizabethtown

### Have You Moved Recently?

Please send any change of address to *The Journal of the Kentucky Medical Association*, 3532 Ephraim McDowell Drive, Louisville, Kentucky 40205. We need your help in keeping our mailing list up to date. You are our best source of information.



## Annual Meeting Highlights—*President's Luncheon*



KMA President, Fred C. Rainey, M.D., Elizabethtown, as his first official duty, presents outgoing President Lee C. Hess, M.D., Florence, a plaque for his distinguished service to the Association.



Mr. Robert H. Henry, Director of Professional Affairs of the United States Pharmacopeial Convention, Inc., entertained some 300 physicians and guests at the President's Luncheon, September 19.



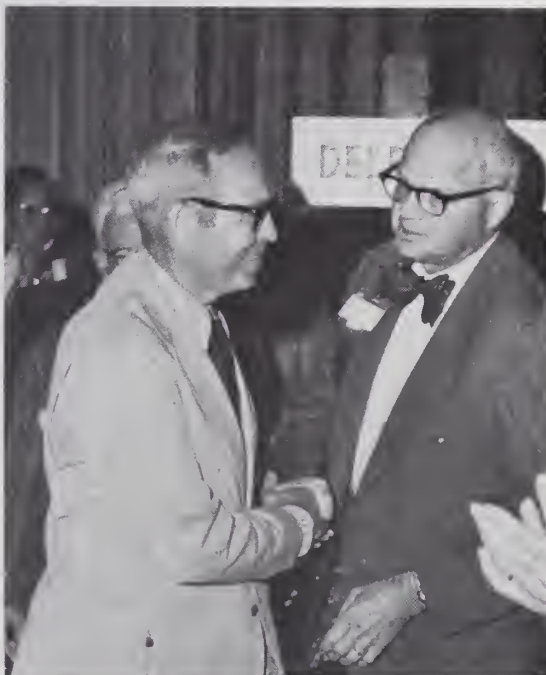
KMA presidents—past, present and future—get together after the President's Luncheon on September 19. They are (left to right): Hoyt D. Gardner, M.D., Louisville, President-Elect; Fred C. Rainey, M.D., Elizabethtown, President; and Lee C. Hess, M.D., Florence, Immediate Past President.

And Then—

### *House of Delegates' Meeting*



Richard F. Grise, M.D., Bowling Green, Chairman of the Awards Committee (center) congratulates the 1973 recipients after the President's Luncheon, September 19. The Distinguished Service Award was presented to Delmas M. Clardy, M.D., Hopkinsville, (left) and John W. Koon, Louisville, (right) received the Kentucky Medical Association Award.



Hoyt D. Gardner, M.D., Louisville, KMA President-Elect, (left) is congratulated by Leslie W. Blakey, M.D., Lexington, (right) as he makes his way to the speaker's podium upon his election at the second session of the House of Delegates, September 19.

# Pinworm therapy is often a family affair



**Contraindications:** History of hypersensitivity to thiabendazole.

**Warnings:** If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.

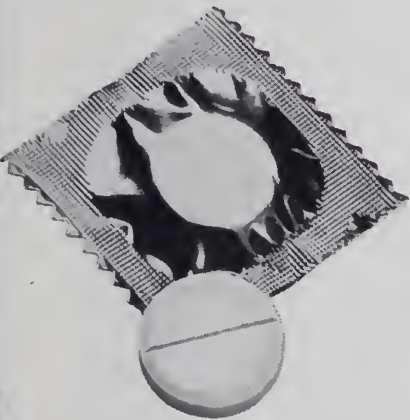
**Precautions:** Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction,

patients should be carefully monitored.

**Adverse Reactions:** Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of live *Ascaris* in the mouth and nose. Hypersensitivity reactions



# Chewable Tablets<sup>500 mg</sup> Mintezol<sup>®</sup> (THIABENDAZOLE | MSD)



so easy to take  
everyone in the family  
can keep to the  
regimen you prescribe

include: fever, facial flush, chills, conjunctival injection, angioedema, anaphylaxis, skin rashes, erythema multiforme (including Stevens-Johnson syndrome), and lymphadenopathy.  
**Supplied:** Chewable tablets, containing 500 mg thiabendazole, in boxes of 36, strip packaged, individually foil wrapped; Suspension, containing 500 mg thiabendazole per 5 ml, in bottles of 120 ml.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

## INDICATION | DOSAGE SCHEDULE

MINTEZOL<sup>®</sup> (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infections. Dosages are weight related. For your convenience, the information in the weight-dose chart below is included in the full prescribing information and in the 1973 edition of PDR.

*The recommended maximum daily dose of MINTEZOL is 3 g (6 tablets).*

MINTEZOL should be given after meals if possible. Dietary restriction, complementary medications, and cleansing enemas are not needed.

The usual dosage schedule for all conditions is two doses per day. The size of the dose is determined by the patient's weight.

Weight-dose chart:

WEIGHT (lb)	EACH DOSE (g)	TABLETS
25	0.25	½
50	0.5	1
75	0.75	1½
100	1.0	2
125	1.25	2½
150 & over	1.5	3

The regimen for each indication follows:

INDICATION	REGIMEN	COMMENTS
Pinworm disease	Two doses per day for 1 day. Repeat in 7 days.  This regimen is designed to reduce the risk of reinfection.	If this is not practical, give 2 doses per day for 2 successive days.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses per day for 2 successive days.	A single dose of 20 mg/lb or 50 mg/kg may be employed as an alternative schedule, but a higher incidence of side effects should be expected.
Creeping eruption	Two doses per day for 2 successive days.	If active lesions are still present 2 days after completion of therapy, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses per day for 2 to 4 successive days according to the response of the patient.	The optimal dosage for the treatment of trichinosis has not been established.

\*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.

**Was Your Delegate Present?**  
**ROLL CALL —**  
**KMA Annual Meeting**

**OFFICERS**

		First Session	Second Session
Speaker	Richard F. Greathouse	Present	Present
Vice-Speaker	Carl Cooper, Jr.	Present	Present
President	Lee C. Hess	Present	Present
President-Elect	Fred C. Rainey	Present	Present
Vice-President	James B. Holloway	Present	Present
Secretary	S. Randolph Scheen	Present	Present
Treasurer	Keith P. Smith	Present	Present
Delegate to AMA	J. Thomas Giannini	Present	Present
Delegate to AMA	John C. Quettermous	Present	Present
Delegate to AMA	David B. Stevens	Present	Present
Alternate Delegate to AMA	Charles G. Bryant	Present	Present
Alternate Delegate to AMA	William W. Hall	Present	Present
Alternate Delegate to AMA	Thomas L. Heavern, Jr.	Present	Present
Parliamentarian	Ben L. Crowder	Present	Present

**TRUSTEES**

District			
First	W. Eugene Sloan	Present	Present
Second	Charles C. Kissinger	Present	Present
Third	Ralph L. Cash	Present	Present
Fourth	W. Bruce Hamilton	Present	Present
Fifth	Edward N. Maxwell	Present	Present
Sixth	Paul J. Parks	Present	Present
Seventh	Thomas P. Leonard, Sr.	Present	Present
Eighth	Carl J. Brueggemann	Present	Present
Ninth	J. Campbell Cantrill	Present	Present
Tenth	David A. Hull	Present	Present
Eleventh	Earl B. Rynerson	.....	.....
Twelfth	Robert N. McLeod, Jr.	Present	Present
Thirteenth	J. Wesley Johnson	Present	Present
Fourteenth	Ballard W. Cassidy	Present	Present
Fifteenth	Harold L. Bushey	Present	Present

**ALTERNATE TRUSTEES**

District			
First	Keith E. Ellis	.....	.....
Second	Kenneth M. Eblen	Present	Present
Third	Edwin R. Davis	.....	.....
Fourth	Emmett W. Wood	Present	Present
Fifth	Lloyd G. Yopp	Present	Present
Sixth	Carlisle V. Dodson	Present	Present
Seventh	John P. Stewart	.....	.....
Eighth	Robert C. Smith	Present	.....
Ninth	James L. Ferrell	Present	Present
Tenth	Irving Kanner	Present	.....
Eleventh	Joseph M. Bush	.....	.....
Twelfth	Paul J. Sides	Present	Present
Thirteenth	Arthur B. Richards	Present	Present
Fourteenth	Jerry D. Fraim	Present	.....
Fifteenth	Walter H. Stephchuck	.....	.....

**PAST PRESIDENTS**

Past President	John S. Harter	Present	.....
Past President	John C. Quettermous	Present	Present
Past President	Walter L. Cawood	Present	Present
Past President	Henry B. Asman	Present	Present
Past President	George Brockman	Present	Present

**DELEGATES**

**First District**

		First Session	Second Session
BALLARD	R. Gary Marquardt	Present	Present
CALLOWAY			
CARLISLE	C. Douglas LeNeave	Present	Present
FULTON	C. J. Mills	.....	.....
GRAVES	Stephen Burkhart	.....	.....
HICKMAN	Edwin Davis	Present	Present
LIVINGSTON	Wally Montgomery	Present	Present
McCRACKEN	James Seabury	Present	Present
MARSHALL	Keith Ellis	Present	Present
DAVIESS			
	<b>Second District</b>		
	James H. Callis	Present	Present
	John S. Oldham	Present	Present
	Marilyn S. Sanders	Present	Present
HANCOCK	B. Presley Smith	.....	.....
HENDERSON	Kenneth Eblen	Present	Present
	John McClellan	.....	.....
McLEAN	E. S. Coleman	.....	.....
OHIO	Robert E. Norsworthy	Present	.....
UNION	Wallis N. Bell	Present	Present

CRITTENDEN  
HOPKINS

LYON  
PENNYRILE MULTI-COUNTY SOCIETY  
CALDWELL  
CHRISTIAN

MUHLBERG  
TODD  
TRIGG

BRECKINRIDGE  
BULLITT  
GRAYSON  
GREEN  
HARDIN

HART  
LARUE  
MARION  
MEADE  
NELSON  
TAYLOR  
WASHINGTON

JEFFERSON

ADAIR  
ALLEN  
BARREN  
BUTLER  
CUMBERLAND  
EDMONSON  
LOGAN  
METCALFE  
MONROE  
SIMPSON  
WARREN

ANDERSON  
CARROLL  
FRANKLIN  
GALLATIN  
GRANT  
HENRY  
OLDHAM  
OWEN  
SHELBY  
SPENCER  
TRIMBLE

**Third District**

R. M. Brandon	.....	.....
James Gully	Present	Present
Kenneth P. Haywood	Present	Present
Mort H. Moseley	.....	.....
Nathaniel Talley	Present	Present
Frank Pitzer	Present	Present
Carl B. Caplinger	Present	Present
Ronilo D. Diaz	Present	.....
Henry R. Bell	Present	Present
W. N. Richardson	Present	Present

**Fourth District**

Earl S. Buchele	Present	.....
J. W. Roney	Present	Present
Victor F. Duvall	Present	Present
George Cheatham	Present	Present
Larry Hall	Present	Present
Terrell Mays	Present	Present
George Boeckmann	Present	Present
Marion A. Douglas, Jr.	.....	Present
Nelson D. Widmer	.....	Present
Christopher Harrison	Present	Present
Forest F. Shely	Present	Present
Dixie Snider	.....	Present

**Fifth District**

John D. Allen, Jr.	Present	Present
James R. Barnes	Present	Present
David H. Bizot	Present	Present
Alan M. Bornstein	.....	Present
McHenry S. Brewer	.....	Present
Glenn W. Bryant	Present	Present
William C. Buschmeyer	.....	Present
(Alt.)		
W. Neville Caudill	Present	Present
Alvin M. Churney	Present	Present
Eugene H. Conner	.....	Present
John H. Doyle	Present	Present
Andrievs J. Dzenitis	.....	Present
Harold Eskind	Present	Present
Richard F. Greathouse	Present	Present
Edward M. Haick	.....	Present
Harold Haller	Present	Present
Eugene H. Kremer, III	Present	Present
Robert L. McClelland	Present	Present
Clyde T. Moore	Present	Present
David Neustadt	Present	Present
Charles R. Oberst	.....	Present
William J. Oliver	Present	Present
Robert G. Overstreet	Present	Present
Clinton R. Potts	.....	Present
James F. Rice	Present	Present
W. Fielding Rubel	Present	Present
William J. Sandman, Jr.	Present	Present
Robert P. Schiavone	Present	Present
David Shipp	Present	Present
Robert S. Tillett (Alt.)	.....	Present
David Townes	Present	Present
W. P. VonderHaar	Present	Present
(Alt.)		
Ralph E. Whitehead	.....	Present
Lloyd G. Yopp	Present	Present

**Sixth District**

George O. Nell	Present	.....
Earl P. Oliver	Present	Present
Daryl P. Harvey	Present	Present
Richard T. C. Wan	.....	.....
Joseph Schickel	.....	Present
C. V. Dodson	Present	Present
L. P. Emberton	.....	.....
James R. Head	.....	.....
L. F. Beasley	Present	Present
Keith Coverdale	.....	Present
Nelson B. Rue	Present	Present
Gerald E. Sullivan	Present	Present

**Seventh District**

Donald F. Roney	Present	.....
William H. Keller	Present	Present
O. M. Patrick (Alt.)	Present	Present
John D. Fielding	Present	Present
Darl B. Shipp	Present	Present
Wyatt Norvell	Present	Present
John H. Leland	Present	Present
O. A. Cull	.....	.....
Willis P. McKee	Present	Present
W. K. Skaggs	.....	.....
Carl Cooper, Jr.	Present	Present

*The information in the Roll Call was taken from the attendance record cards signed by the delegates prior to the meetings of the House, September 17 and 19.*



Eighth District			
BOONE	William R. Yates	Present	Present
CAMPBELL-	Charles D. Eversole	Present	Present
KENTON	Ronald G. Frage	Present	.....
	Alfred A. Jacobs	Present	Present
	Robert K. Johnson	.....	.....
	Richard Menke (Alt.)	Present	Present
	Robert W. O'Conner	Present	Present
	Robert E. Smith	Present	Present
	Fred Stine (Alt.)	.....	Present
	Jerry C. Sutkamp	Present	Present

Ninth District			
BATH	James L. Ferrell	Present	Present
BOURBON	J. M. Stevenson	Present	Present
BRACKEN	R. W. Fidler	Present	Present
FLEMING	Don R. Stephens	Present	Present
HARRISON	Claude E. Cummins, Jr.	Present	Present
MASON	W. R. Kingsolver	.....	.....
NICHOLAS	Robert L. McKenney	.....	.....
PENDLETON			
ROBERTSON			
SCOTT	R. Kendall Brown	Present	Present

Tenth District			
FAYETTE	Leslie W. Blakey	Present	Present
	M. Cary Blaydes	Present	Present
	Peter P. Bosomworth	Present	Present
	Thomson R. Bryant, Jr.	Present	Present
	Winston L. Burke	.....	Present
	Thomas F. Coats	Present	Present
	Glenn U. Dorroh	Present	Present
	Ward O. Griffen	Present	Present
	Richard F. Hench	Present	Present
	Richard B. McElvein	Present	Present
	Carl H. Scott	Present	Present
	John M. Stoeckinger	Present	Present
	R. Herman Playforth	.....	.....
	(Alt.)	Present	Present
	John E. Trevey	Present	Present
	James G. Wilhite	Present	Present
JESSAMINE	J. Sankey Williams	Present	.....
WOODFORD	Lewis E. Wash	Present	Present

Eleventh District			
CLARK	Charles G. Noss	.....	.....
ESTILL	S. G. Marcum	.....	.....
JACKSON	Philip Curd	Present	Present
LEE	Carl W. Noble	.....	.....
MADISON	Don E. Cloys	Present	Present
MENIFEE			
MONTGOMERY	Don C. McFadden	.....	.....
OWSLEY	Mildred B. Gabbard	.....	Present
POWELL			
WOLFE	Paul F. Maddox	Present	Present

Twelfth District			
BOYLE	John M. Baird	Present	.....
CASEY	Garnett J. Sweeney	Present	Present
CLINTON	Floyd B. Hay	Present	Present
GARRARD	Paul J. Sides	Present	Present
LINCOLN	Rodney K. Bates	.....	.....
MCREARY			
MERCER	Bacon R. Moore, III	Present	Present
PULASKI	J. Roy Biggs	.....	Present
	Danny Clark	Present	Present
	Orville J. Stein (Alt.)	Present	.....
ROCKCASTLE			
RUSSELL	Charles E. Peck	.....	.....
WAYNE			

Thirteenth District			
BOYD	Larry B. Craycraft	Present	Present
	Garner E. Robinson	Present	Present
	Charles A. Webb	.....	Present
CARTER	Harold Shufflebarger	.....	.....
ELLIOTT	Brown L. Adkins	.....	.....
GREENUP	Thomas E. Stevens (Alt.)	Present	Present
LAWRENCE	A. B. Richards	Present	Present
LEWIS	Milton Brindley	.....	.....
MORGAN	George R. Bellamy	.....	.....
ROWAN	Ewell Scott	Present	Present

Fourteenth District			
BREATHITT	F. C. Lewis	.....	.....
FLOYD	L. D. Martin	Present	Present
JOHNSON	Franklin K. Belhasen	.....	Present
	Jerry D. Fraim (Alt.)	Present	.....
KNOTT			
LETCHER	James B. Tolliver	Present	Present
MAGOFFIN			
MARTIN	Raymond D. Wells	Present	.....
PERRY	Keith Cameron	.....	Present
	Charles C. Rutledge	.....	.....
	(Alt.)	Present	.....
PIKE	Elvis R. Thompson	.....	.....
	(Alt.)	Present	.....
	Frank T. Varney	.....	Present
	James B. Zimmerman	.....	Present

Fifteenth District			
BELL	Francis Forde	.....	.....
	Emanuel Rader	Present	Present
CLAY	William E. Becknell	Present	.....
HARLAN	R. Smith Howard	Present	.....
	Paul O. Wells	Present	Present
KNOX	Rogelio A. Acosta	Present	.....
LAUREL	Rufino Crisostomo (Alt.)	.....	Present
LESLIE	E. C. Seeley (Alt.)	.....	Present
WHITLEY			
	R. D. Pitman	Present	Present

## National Award Announced

The Medical Society of the State of New York announces the opening of competition for the 1974 *Albion O. Bernstein, M.D. Award*. The national award, given to a physician or scientist who has recently made a widely beneficial scientific discovery in medicine, comprises \$2,000. Deadline for nominations is December 15, 1973. They should be sent to: Awards Committee, Medical Society of New York, 420 Lakeville Road, Lake Success, New York 11040.

## STATEMENT OF OWNERSHIP MANAGEMENT AND CIRCULATION

(Act of August 12, 1970; Section 3685.

Title 39, United States Code)

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7. Owner: Kentucky Medical Association, 3532 Ephraim McDowell Drive, Louisville, Kentucky 40205.
8. Known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages or other securities: Citizens Fidelity Bank and Trust Company, P.O. Box 1140, Louisville, Kentucky 40201.
10. Nonprofit organizations authorized to mail at special rates: The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes have not changed during the preceding 12 months.
11. Extent and nature of circulation:

	Average no. copies each issue during preceding 12 months	Single issue published nearest to filing date
A. Total no. copies printed:	3329	3400
B. Paid circulation:		
1. Sales through dealers and carriers, street vendors and counter sales:	179	167
2. Mail subscriptions:	2811	2890
C. Total paid circulation:	2990	3057
D. Free distribution by mail, carrier or other means:		
1. Samples, complimentary, and other free copies:	296	312
2. Copies distributed to news agents but not sold:	0	0
E. Total distribution:	3286	3369
F. Office use, left over, unaccounted, spoiled after printing:	43	31
G. Total:	3329	3400

I certify that the statements made by me above are correct and complete. Robert G. Cox, Managing Editor.

# Gantanol® (sulfamethoxazole) and the

## 0.1 M.I.C.

### for three hours

Similar elongations occur regardless of antibacterial used.

## 1.0 M.I.C.

### for three hours

Similar midcell defects seen with increased antibacterial concentrations.

## 10 M.I.C.

### for three hours

Similar spheroplast-like forms appear with high concentrations of the antibacterials.



E. coli + sulfamethoxazole



E. coli + tetracycline

## The Scanning Electron Microscope (SEM) reveals the effect

**The *in vitro* experiment.** These SEM photomicrographs were taken as part of a study exploring the effects of various antibacterials with different modes of action on the surface morphology of bacteria. The scanning electron microscope was used because of its ability to show three-dimensional views of organisms, enabling better definition and appreciation of surface morphology.

For this portion of the experiment, *E. coli* were exposed to the following agents: sulfamethoxazole, a chemical drug which acts by interference with para-

aminobenzoic acid utilization; tetracycline, which interferes with intracellular protein synthesis; and cephalothin and ampicillin, which are cell-wall-active drugs.

Strains of *E. coli*, each susceptible to the respective antibacterials, were exposed for 15, 30, 60, 120 and 180 minutes and 18 hours to several concentrations of each agent.

Following the 180-minute or three-hour exposures to the antibacterials at 0.1 M.I.C., 1.0 M.I.C. and 10 M.I.C., photoscans of the *E. coli* were taken. As shown above, regardless of the antibacterial agent used or its mode of action, the changes in surface morphology were remarkably similar... elongation at low drug concentrations, midcell defects at higher



# Three-Dimensional World of SEM



E. coli + cephalothin



E. coli + ampicillin

## of certain antibacterials on bacterial surface morphology

concentrations and ultimate progression to spheroplast-like forms.<sup>1</sup>

**The interpretation.** "At present, the significance of these observations in clinical infection must be considered with caution, but it is hoped that these data will stimulate a reevaluation of present concepts of the nature and role of morphological variants of bacteria exposed to a variety of antibacterial factors."<sup>2</sup>

**It should be noted that this information represents only *in vitro* research. No clinical significance can be drawn from this study concerning the effective-**

**ness of any of the agents discussed, as it is not possible to extrapolate *in vitro* data to humans. This information is presented to demonstrate the continuing research activities in the area of antibacterials, particularly modes of action and surface morphology.**

<sup>1</sup>Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

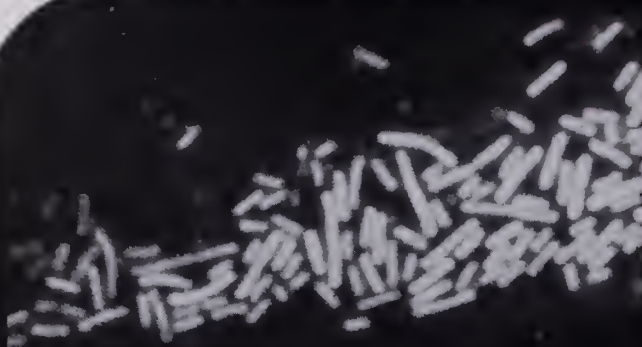
<sup>2</sup>*Antimicrob. Agents Chemother.*, 1:164, 1972.

See next two pages for product information.

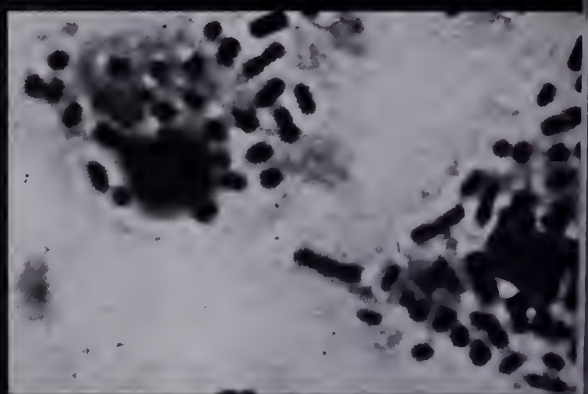


Roche Laboratories  
Division of Hoffmann-La Roche Inc  
Nutley, N.J. 07110

# Observations from



*E. coli*—Fluorescent stain



*Klebsiella* sp.—Stain to define capsular envelope

## ■ Effective control of primary susceptible bacterial offenders

Gantanol® (sulfamethoxazole) is effective against susceptible strains of *E. coli*, the most common cause of urinary tract infections. It is also highly effective against other susceptible gram-negative and gram-positive organisms, usually *Klebsiella*-*Aerobacter*, *Staph. aureus* and *Proteus mirabilis*.

## ■ Prompt antibacterial blood and urine levels—in from 2 to 3 hours

Antibacterial levels of Gantanol usually appear in blood and urine in from 2 to 3 hours after the initial 2-Gm adult dose. This rapid initiation of effective antibacterial activity enables prompt treatment of certain nonobstructed urinary tract infections and may also help avert possible sequelae.

## ■ Around-the-clock coverage for 14 days

Mounting evidence in current medical literature suggests a minimum of 14 days' continuous therapy for certain urinary tract infections.\* Following the initial 2-Gm adult dosage of Gantanol, each 1-Gm dose provides up to 12 hours of antibacterial activity during the treatment period. When urinary tract infection is more severe, *t.i.d.* (q. 8 h.) dosage schedule may be required. Both regimens provide around-the-clock therapy, important because normal urinary retention during sleep tends to favor bacterial proliferation. It is also convenient for patients not to have to take middle-of-the-night medication.

## ■ Also effective in certain nonobstructed chronic and recurrent urinary tract infection

Nonobstructed urinary tract infections, such as cystitis or pyelonephritis—chronic and/or recurrent—develop more commonly in the elderly and debilitated, and response to Gantanol is often highly satisfactory.

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note:** Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

**Contraindications:** Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

**Warnings:** Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-

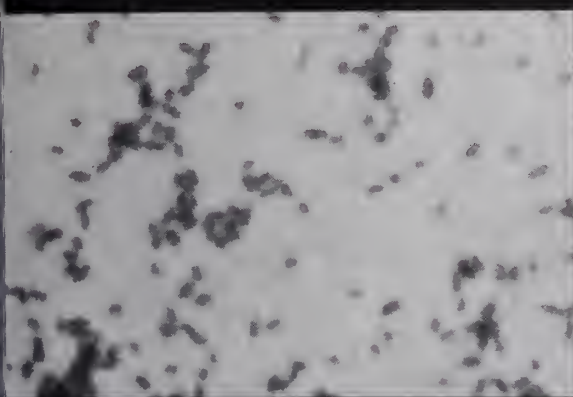
hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

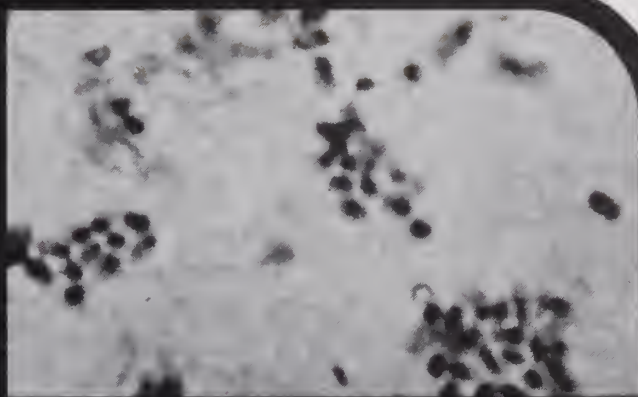
**Adverse Reactions:** Blood dyscrasias (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglo-



# clinical practice



Enterobacter sp.—Gram stain showing characteristic gram-negative rod



*Proteus mirabilis*—Flagella stain

## ■ Your option: tablets or suspension

Gantanol Tablets or the pleasant-tasting, cherry-flavored Suspension can provide dependable antibacterial activity to control susceptible nonobstructed cystitis and pyelonephritis. Symptomatic improvement usually may be expected to begin within 24 to 48 hours. Usual precautions with sulfonamide therapy should be observed, including adequate fluid intake. Gantanol is generally well tolerated, with relative freedom from complications; the most common side effects are nausea, vomiting and diarrhea. Frequent c.b.c.'s and urinalyses with microscopic examination are recommended during therapy.

\*Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

## In nonobstructed cystitis due to susceptible organisms

# Gantanol<sup>®</sup> B.I.D. (sulfamethoxazole) Basic therapy

binemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

**Dosage:** Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

*Usual adult dosage:* 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

*Usual child's dosage:* 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

**Supplied:** Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

ROCHE

Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110

If you're in the process of deciding where to get a new business phone system, here's some basic information that'll help you.

More than likely, total service will be crucial in your final selection. And total service is many things:

**How about insurance, for instance?**

How much will it cost to insure a phone system that's leased or bought?

If you're using South Central Bell equipment, insurance premiums are not your concern.

**Who replaces equipment?**

Suppose a natural disaster damages or destroys your phone system, how much will replacement cost? How soon can it be done? South Central Bell will replace all damaged Bell-provided equipment *at no charge to you*. If necessary, we'll fly people and equipment to your aid.

**What about maintenance?**

Depth of maintenance capacity is most critical in this decision. Exactly what does the maintenance contract include? How about the experience and availability of maintenance people? Who do you call? One call to South Central Bell gets expert help on the way, quickly. South Central Bell equipment will be

maintained *at no extra charge*, for as long as you have the service—even if it should require replacing the equipment completely.

**How far away is it?** Our maintenance and repair are performed by full-time, fully trained, experienced craftsmen. Available wherever your business phone system is.

**"IF YOU ARE  
THINKING OF  
BUYING OR LEASING  
A BUSINESS PHONE  
SYSTEM,  
I URGE YOU TO  
CONSIDER THESE  
IMPORTANT  
QUESTIONS."**



Mike Sermersheim  
General Marketing Manager  
South Central Bell

South Central Bell has repair crews available 7 days a week—with 24-hour emergency service—*at no extra charge*.

**Spare parts and guarantees?** Where will spare parts come from? And when? How long are they guaranteed? South Central Bell has spare parts strategically located throughout the state, for quick, dependable supply back-up. And local distribution means "right-away" service. Dependable, continual service is our responsibility—and we will meet that responsibility.

**Are training and retraining included?**

We train all your phone system operators—now and as often as these people are replaced.

And we'll train all your employees to use your telephone system *at no extra charge*.

**Why are we at South Central Bell telling you all this?** It's simple. We're in the business of total communications service. We are not just selling piece parts. We sell total service. Whether one telephone or a complex network nationwide. South Central Bell is totally committed to both the business and residence phone user.

We offer modern up-to-date equipment developed by a nationally renowned communications team, Bell Labs and Western Electric, backed by South Central Bell's comprehensive service program.

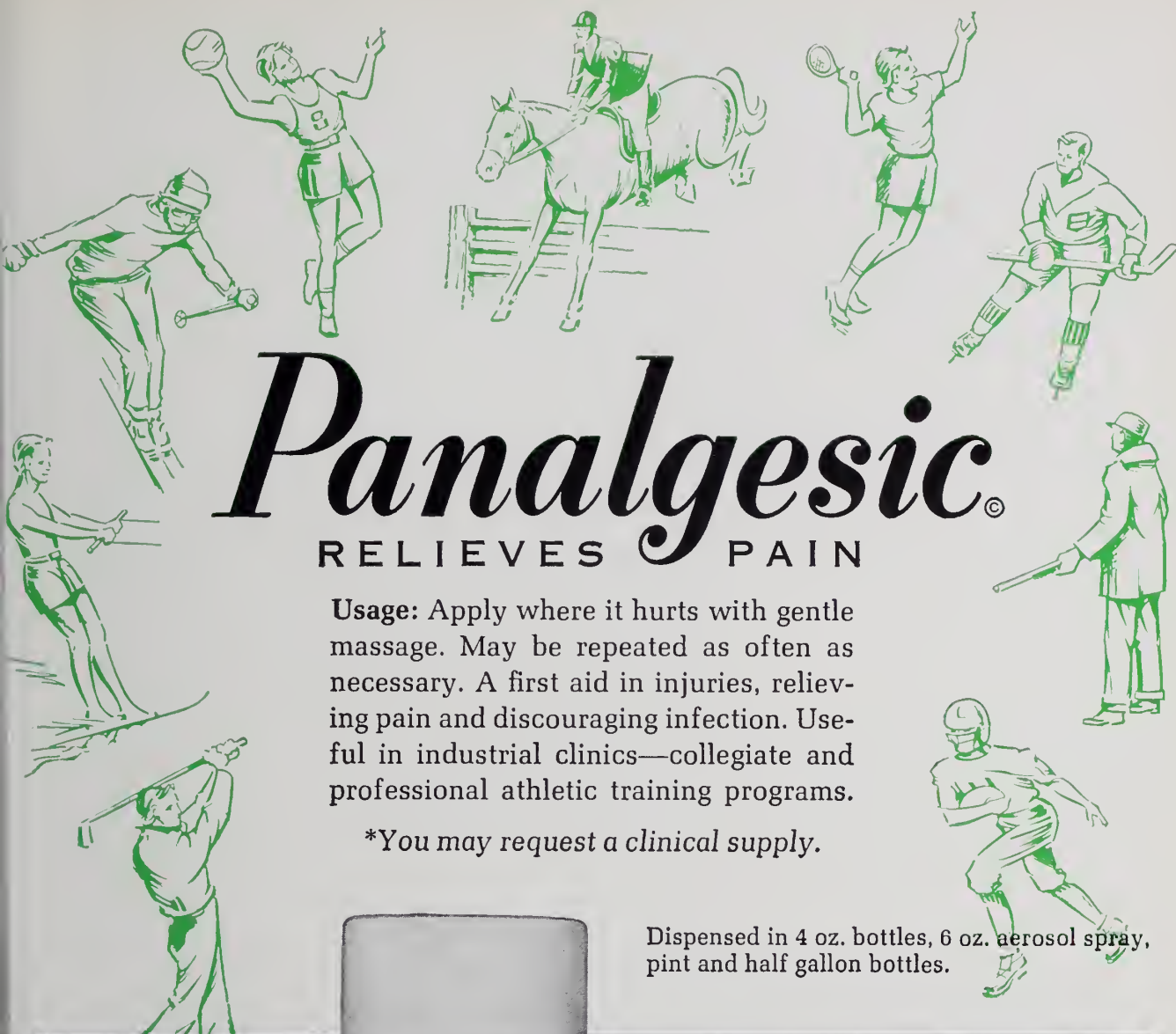
Now that you know the basics, call one of our communications consultants. Get the whole Bell story. The South Central Bell total service story.



**South Central Bell**

The only full-service communications company in town.





# Panalgesic<sup>®</sup>

## RELIEVES PAIN

**Usage:** Apply where it hurts with gentle massage. May be repeated as often as necessary. A first aid in injuries, relieving pain and discouraging infection. Useful in industrial clinics—collegiate and professional athletic training programs.

*\*You may request a clinical supply.*

Dispensed in 4 oz. bottles, 6 oz. aerosol spray, pint and half gallon bottles.



WILLIAM P. POYTHRESS & COMPANY, INC.

RICHMOND, VIRGINIA 23261

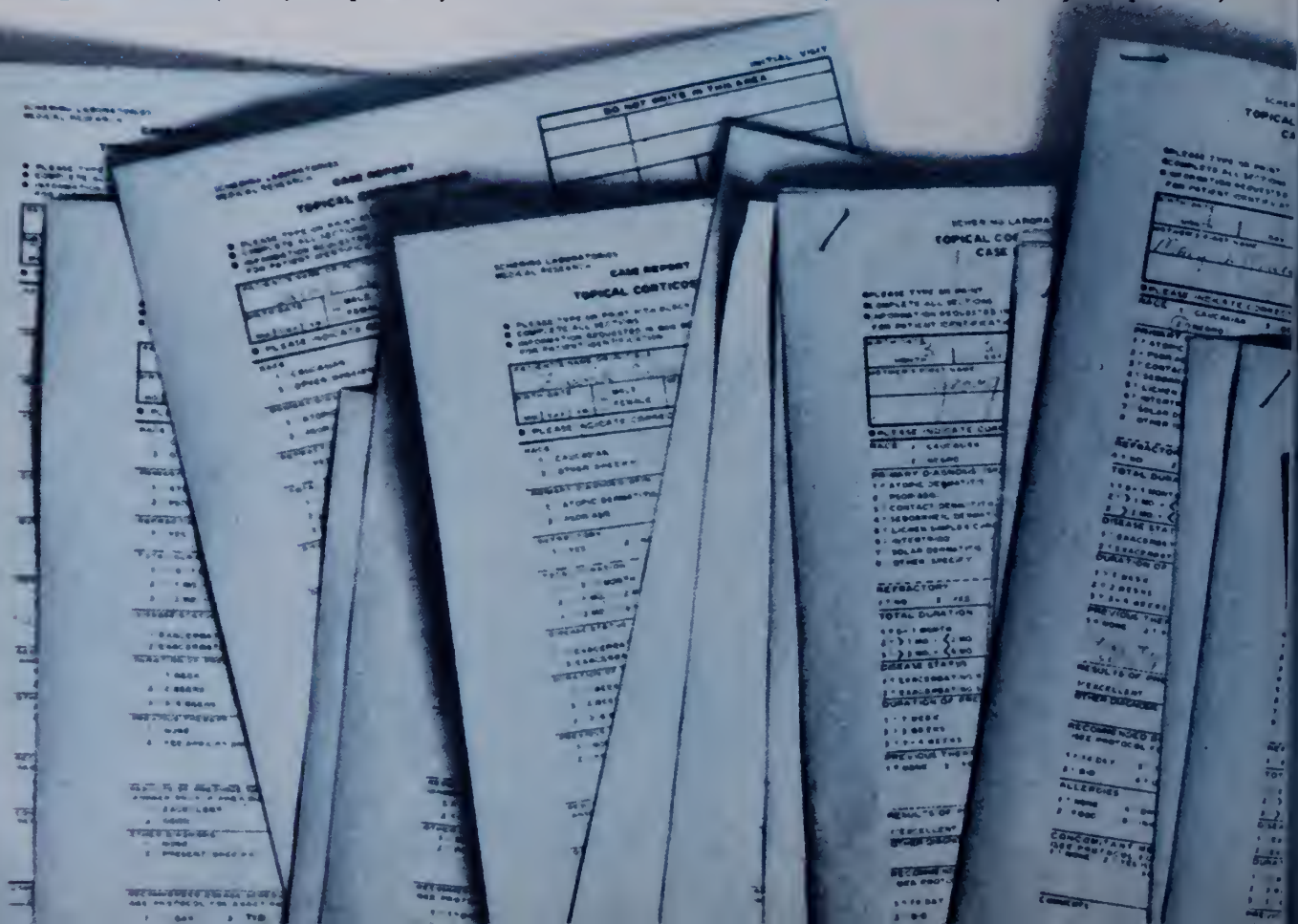
# A topical steroid that has clinically succeeded

*in study...after study...after study*<sup>1-6</sup>

**Excellent/good results**

**85%** in psoriasis  
(150 of 177 patients)<sup>1</sup>

**92%** in atopic eczema  
(231 of 251 patients)<sup>1</sup>





# Valisone<sup>®</sup>

brand of

## betamethasone valerate (0.1%) Cream/Ointment

Plus economy B.i.d. dosage often found effective!  
Available in 5, 15, and 45 Gm. tubes.

96% in contact dermatitis  
(81 of 84 patients)<sup>1</sup>

### CLINICAL CONSIDERATIONS:

**Description** VALISONE products contain betamethasone valerate (9-fluoro-11 $\beta$ ,17,21-trihydroxy-16 $\beta$ -methylpregna-1,4-diene-3,20-dione 17-valerate). Each gram of VALISONE Cream 0.1% contains 1.2 mg. betamethasone valerate (equivalent to 1.0 mg. betamethasone) in a soft, white, hydrophilic cream of water, mineral oil, petrolatum, polyethylene glycol 1000 monooctyl ether, cetostearyl alcohol, monobasic sodium phosphate, and phosphoric acid; 4-chloro-m-cresol is present as a preservative. Each gram of VALISONE Ointment 0.1% contains 1.2 mg. betamethasone valerate (equivalent to 1.0 mg. betamethasone) in an ointment base of liquid and white petrolatum, and hydrogenated lanolin. VALISONE Cream and Ointment contain no parabens.

**Indications** VALISONE Cream and Ointment are indicated for the relief of the inflammatory manifestations of corticosteroid-responsive dermatoses.

**Contraindications** VALISONE Cream and Ointment are contraindicated in vaccinia and varicella. Topical steroids are contraindicated in those patients with a history of hypersensitivity to any of the components of the preparation.

**Precautions** If irritation develops with the use of VALISONE Cream or Ointment, treatment should be discontinued and appropriate therapy instituted. In the presence of an infection, the use of an appropriate antifungal or antibacterial agent should be instituted. If a favorable response does not occur promptly, the corticosteroid should be discontinued until the infection has been adequately controlled. If extensive areas are treated or if the occlusive technique is used, the possibility exists of increased systemic absorption of the corticosteroid and suitable precautions should be taken. Although topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use in pregnant females has not been absolutely established. Therefore, they should not be used extensively in pregnant patients, in large amounts, or for prolonged periods of time. VALISONE Cream and Ointment are not for ophthalmic use.

**Adverse Reactions** The following local adverse reactions have been reported with topical corticosteroids: burning, itching, irritation, dryness, folliculitis, hypertrichosis, acneform eruptions, and hypopigmentation. The following may occur more frequently with occlusive dressings than without such therapy: maceration of the skin, secondary infection, skin atrophy, striae, and miliaria.

**Dosage and Administration** Apply a thin film of VALISONE Cream or Ointment to the affected skin areas one to three times a day. Clinical studies of VALISONE have indicated that dosage only once or twice a day is often feasible and effective. AUGUST 1972  
For more complete details, consult Schering literature available from your Schering Representative or Professional Services Department, Schering Corporation, Kenilworth, New Jersey 07033.

**References:** (1) Files of Headquarters Medical Research Division, Schering Corporation. (2) Carter, V. H., and Noojin, R. O.: *Curr. Therap. Res.* 9:253, 1967. (3) Falk, M. S.: *Cutis* 2:788, 1966. (4) Goldblum, R. W.: *Pennsylvania Med.* 69:50, 1966. (5) Nierman, M. M.: *J. Indiana M. A.* 10:1184, 1966. (6) Zimmerman, E. H.: *Arch. Dermat.* 95:514, 1967.

DO NOT WRITE IN THIS AREA

SCHERING LABORATORIES  
TOPICAL CORTICOSTEROID  
CASE REPORT

PLEASE TYPE OR PRINT  
COMPLETE ALL SECTIONS  
AND INDICATION REQUESTED IN BOX BELOW MUST BE SUPPLIED  
FOR PATIENT IDENTIFICATION

DATE: 10/1/72

NAME: [Handwritten]

AGE: 26 SEX: M RACE: [Handwritten]

REL: [Handwritten]

PLEASE INDICATE CORRECT RESPONSE BY CHECKING APPROPRIATE NUMBER

1. PRIMARY DIAGNOSIS (FBI)  
1. ATOPIC DERMATITIS  
2. PSORIASIS  
3. CONTACT DERMATITIS  
4. SEBORRHEIC DERMATITIS  
5. LICHEN SIMPLEX CHRONICUS  
6. INTERTRIGO  
7. SOLAR DERMATITIS  
8. OTHER (SPECIFY)

2. EVALUATION OF SEVERE AND SYMPTOMS  
1. NONE 2. SLIGHT 3. MODERATE 4. SEVERE

3. OVERALL EVALUATION OF CONDITION  
1. COMPLETELY IMPROVED 2. IMPROVED 3. NO CHANGE 4. WORSE

4. SPECIFIC EVALUATION  
1. IRRITATION 2. BURNING 3. ITCHING 4. DRYNESS 5. FOLLICULITIS 6. HYPERTRICHOSIS 7. ACNEFORM ERUPTIONS 8. HYPOPIGMENTATION

5. REACTION TO PRESENT PREPARATION  
1. NONE 2. SLIGHT 3. MODERATE 4. SEVERE

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## EYES RIGHT!

...to SOUTHERN OPTICAL

LOUISVILLE Southern Optical Bldg. — 640 S. 4th  
Contact Lenses — 640 S. 4th  
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Doctors Office Bldg., Liberty at Floyd  
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Professional Bldg. East, 3101 Breckinridge Lane

ST. MATTHEWS 313 Wallace Center  
108 McArthur Drive

NEW ALBANY Professional Arts Bldg., 1919 State Street

BOWLING GREEN 524 East Main Street

OWENSBORO Doctors Bldg., 1001 Center Street



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400 Sherburn Lane  
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Mailing Address: P.O. Box 20065, Louisville, Kentucky 40220



# when pain goes on... and on... and on—



For the patient with a terminal illness, PAIN past, present, and future can dominate his thoughts until it becomes almost an obsession. The more he is aware of the pain he is now experiencing, the more difficult it is to erase his memory of yesterday's pain, and to allay his fearful anticipation of tomorrow's pain.


Surely the last thing this patient needs is an analgesic containing caffeine to stimulate the senses and heighten pain awareness. A far more logical choice is Phenaphen with Codeine. The sensible formula provides  $\frac{1}{4}$  grain of phenobarbital to take the nervous "edge" off, so the rest of the formula can help control the pain more effectively. Don't you agree, Doctor, that psychic distress is an important factor in most of your terminal and long-term convalescent patients?

the analgesic formula that calms instead of caffeinates

## Phenaphen<sup>®</sup> with Codeine

Phenaphen with Codeine No. 2, 3, or 4 contains: Phenobarbital ( $\frac{1}{4}$  gr.), 16.2 mg. (warning: may be habit forming); Aspirin ( $2\frac{1}{2}$  gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Codeine phosphate,  $\frac{1}{4}$  gr. (No. 2),  $\frac{1}{2}$  gr. (No. 3) or 1 gr. (No. 4) (warning: may be habit forming).

**Indications:** Provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products, excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.

 Phenaphen with Codeine is now classified in Schedule III, Controlled Substances Act of 1970. Available on written or oral prescription and may be refilled 5 times within 6 months, unless restricted by state law.

A. H. Robins Company, Richmond, Va. **A-H-ROBINS**

Maybe the patient's self-diagnosis is right. He could have hay fever. But that bright red nasal mucosa, along with the thick discharge and excoriation around the nares, strongly suggests that the main problem is a cold. Hay fever or another form of allergic rhinitis may or may not be an underlying factor.

If a complete history and examination rule out allergic rhinitis, the long-term outlook will be a lot more favorable than his own "diagnosis" would have indicated.

But right now, whether he's got allergic rhinitis or a cold, he's suffering from the same irritat-

ing symptoms of drip, congestion and stuffiness. Try DIMETAPP EXTENTABS®. They're formulated to relieve these symptoms without much chance of causing drowsiness or overstimulation. Your patients will appreciate the 24-hour relief they can get from just one tablet every 12 hours.

# Cold or



# Allergy?

**Whether it's a cold or an allergy, Dimetapp Extentabs® effectively relieve stuffiness, drip and congestion.**

**INDICATIONS:** Dimetapp Extentabs are indicated for symptomatic relief of allergic manifestations of upper respiratory illnesses, such as the common cold, seasonal allergies, sinusitis, rhinitis, conjunctivitis and otitis. In these cases it quickly reduces inflammatory edema, nasal congestion and excessive upper respiratory secretions, thereby affording relief from nasal stuffiness and postnasal drip.

**CONTRAINDICATIONS:** Hypersensitivity to antihistamines of the same chemical class. Dimetapp Extentabs are contraindicated during pregnancy and in children under 12 years of age. Because of its drying and thickening effect on the lower respiratory secretions, Dimetapp is not recommended in the treatment of bronchial asthma. Also, Dimetapp Extentabs are contraindicated in concurrent MAO inhibitor therapy.

**WARNINGS** *Use in children:* In infants

and children particularly, antihistamines in overdosage may produce convulsions and death.

**PRECAUTIONS:** Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness such as driving an automobile, operating machinery, etc. Patients receiving antihistamines should be warned against possible additive effects with CNS depressants

such as alcohol, hypnotics, sedatives, tranquilizers, etc.

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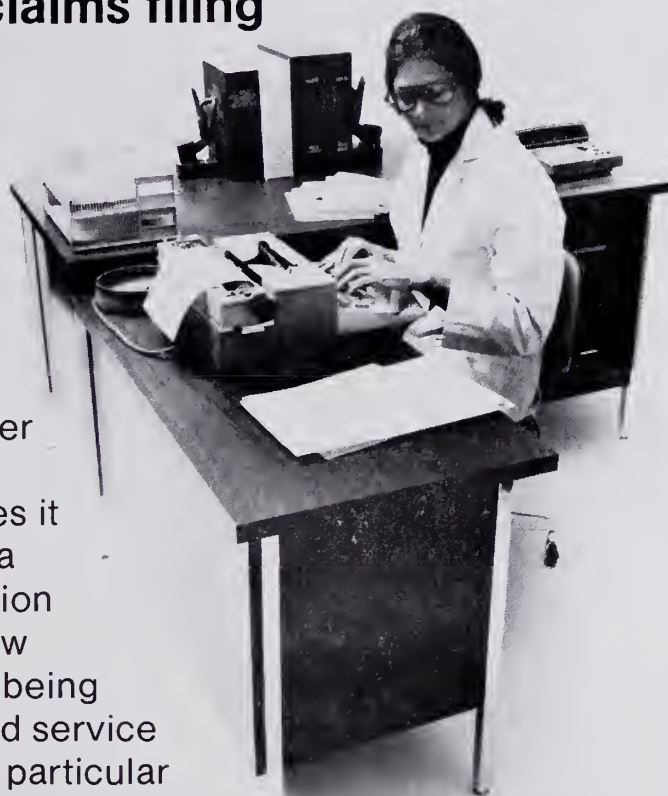


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**Contraindications:** Patients with known hypersensitivity to the drug.

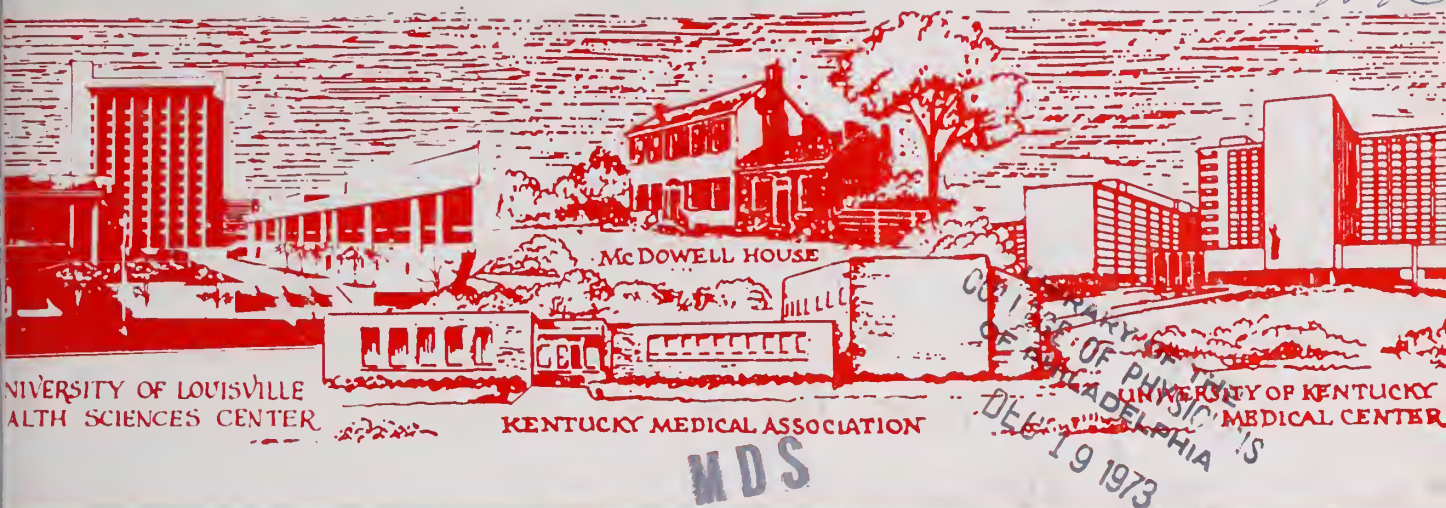
**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

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# The Journal of The **KENTUCKY** Medical Association Season's Greetings

## **Gastroschisis**

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**Contraindicated:** Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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# Journal of The KENTUCKY Medical Association

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# MESSAGE FROM THE PRESIDENT

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## All You Wanted To Know About PP—But Were Afraid To Ask!

KMA can proudly boast having an excess of 95% of the practicing physicians in Kentucky as members of KMA—but does the mere paying of dues to KMA discharge your responsibility to the profession, your patients, and to **yourself**? I would suggest to you that it definitely does not.

At our last Annual Meeting, our secretary revealed that over 400 physicians had attended **committee** meetings, traveling over 60,000 miles, and donating over 1,200 man hours. Were **you** among that number?

Although it is frequently disappointing to have physicians decline to serve our Association in various capacities, the cardinal “sin” is to accept the job and then simply not execute that responsibility.

I am very pleased with the rapid progress many of our committees are already making. It is paramount that all physicians, including all specialties, realize we must stand as one, coordinating our efforts for maximal success.

Government is obviously in medicine to stay, therefore, we must participate in government. More physicians should become more involved in political campaigns, supporting the candidate of their choice. Our **only** political arm is our PAC movement (KEMPAC), yet only about one-third of our members belong—a mere \$35 membership fee. Do **you** belong? If not, are you doing your share?

The next session of the Kentucky Legislature will convene in January. I urge all physicians to maintain rapport and close contact with their legislators. When you are asked by our Legislative Committee to do a job, **be sure it is done!**

With full PP (physician participation) we are better informed, more uniformly guided, and doubtlessly more successful in our various endeavors. Perhaps the most valuable physician the profession can have is one who willingly and readily performs “menial tasks”—**that** is what gets the job done!

In closing with a phrase, “He who rows the boat, has not the time to rock it.”

*Fred C Rainey*

# A Link in the Chain

## Is Our P.R. Showing?

Dear Doctor:

Physicians and their wives realize now more than ever before that it is not only desirable but essential that we improve our relations with our public. As the KMA is making Public Relations a priority, it is surely as appropriate an endeavor for the Auxiliary.

Mrs. C. Kenneth Peters is the chairman of the newly formed Auxiliary Public Relations Committee, and Mrs. C. N. Richardson is the Committee's Co-Chairman. The Auxiliary is very fortunate to have the expertise of these two ladies, as both have had formal education and training in the public relations field. They have helped the Auxiliary not only develop priorities and goals in this area, but they have made some concerted efforts toward helping us achieve these goals.

In an effort to improve public relations within our organization, a periodic newsletter is being sent to the Auxiliary leadership. And we are presently having some informational materials printed for In-house as well as public distribution. This information tells of our Auxiliary projects and programs and is designed to communicate to others our genuine concern and involvement in areas of health education and health services.

Though we feel the Auxiliary has a good rapport with the physicians of KMA, we felt a definite need to improve communications so that we might be a more effective force on their behalf. Therefore, on November 8th, this president met with the KMA Advisory Committee to the Woman's Auxiliary. This first meeting was basically for the purpose of communicating to these advisors what the Auxiliary is doing, our priority areas for the year, some of our recent accomplishments, as well as our problems and concerns. Also the Auxiliary wished to convey by way of this meeting our desire to be helpful and our willingness to cooperate in any way possible. In addition, Mrs. Peters and I will be meeting with the KMA Public Relations Committee in an effort to coordinate our efforts.

Improved public relations with the news media and the lay public is of course the most difficult area. Even so, I can report a degree of progress in this area too. And this we are accomplishing by making an effort to gain greater exposure of our programs and projects which are designed to benefit both lay individuals and groups in the various communities in which auxiliarians live.

It is indeed difficult to accept a challenge which so obviously necessitates literally weeks, months, and years of continuous efforts to succeed. But it was a necessary endeavor, and we have accepted the challenge. We have only made a beginning, but at least our P.R. is showing—even if only a little bit.

MRS. WILLIAM PEARSON (SARA)  
PRESIDENT, WA-KMA





## FOUNDATION PAGE



### KENTUCKY FOUNDATION FOR MEDICAL CARE

## Continuing Medical Education Where We Stand

**M**ANY battles have been fought in medical circles, both here and elsewhere, over mandatory continuing education for physicians. The culmination of this controversy or at least a respite, occurred here during the recent sessions of the House of Delegates.

During these meetings, the Delegates considered recommendations made by our Continuing Medical Education Committee which called for a two part initial step toward continuing education in Kentucky. The first would have KMA set up accredited "centers" across the state, and the second suggested requirements by specialty and sanctions for failure to meet those requirements.

The House expressed its approval of the concept of mandatory education, but directed that the mechanics of establishing requisite "hours" and imposing penalties be given further study. The institution of a statewide system of education centers and their accreditation by KMA was endorsed.

Establishment of educational centers was conceived so that training opportunities would be accessible to physicians locally, therefore local centers would be most beneficial. These centers could be set up at the two university medical centers, in local hospitals, clinics, or even through county medical societies. Using an accreditation mechanism developed by the Continuing Medical Education Committee, each proposed center will be required to meet standards for such categories as curriculum, teaching staff, educational methods, administration and others. KMA will seek accreditation for the total program from the American Medical Association and, in turn, accredit each local center individually. Approval of

local centers will be based on site surveys conducted by trained KMA members.

The Education Committee has suggested that the system include reasonable "hourly" education requirements such as those described in the CME plan of the Oregon Medical Association. I would hope that our own KMA Interspecialty Council might take the lead by offering "approved" required hours by specialty after consultation with their respective specialty groups. Acting in a liaison role, the Interspecialty Council could coordinate the efforts of its member societies not only in establishing educational hour requirements but in improving the KFMC guidelines for care and developing new diagnostic treatment criteria. If the Council can become active in this fashion, information submitted by the specialty societies could be presented to the 1974 House of Delegates for implementation.

Once again we are faced with a serious concern that will affect our private practices irreversibly, but I feel, affirmatively. No one can validly question the benefits of on-going education. The question that confronts us however, is how will that educational process be implemented. Here is another situation of "handwriting on the wall." This is something we must do ourselves.

This year, the Education Committee will be working on a program to bring learning situations to the membership. This action was approved and directed by the House of Delegates. But it won't work, unless we all support it. Our obligation to our patients and our profession demands that we do so.

DAVID A. HULL, M.D.  
PRESIDENT



# MATERNAL MORTALITY



## From the Files of the KMA Maternal Mortality Study Committee

—Edited by John W. Greene, Jr., M.D.

**T**HIS 15-year-old single, Black, gravida I, para 0 was brought to the emergency room at 8:45 a.m. on June 25, 1972, by her mother. She had not seen her physician in over two months. She was having a convulsive seizure. There was no past history of seizures. EDC was unknown. Her mother reported that she had been having severe headaches, some shortness of breath, and swelling of her legs.

She appeared older than her stated age. Her pupils were equal, round, and regular. There was an excessive amount of mucus present in the nose. Her mouth was clamped shut, biting her tongue and a large bleeding laceration was noted. A padded mouth gag was inserted. The neck veins were distended. Pulse rate was 120 and she was hyperventilating. There were loose, coarse rales present throughout both lungs but no evidence of cardiomegaly was present. Blood pressure was 180/90. The abdomen was compatible with an eight month pregnancy. The uterus was hard with no evidence of tenderness. However, the patient was thrashing about in bed. No fetal heart was heard. A pelvic examination was deferred since she was having a seizure. She was treated with 10 cc 50%  $\text{MgSO}_4$ , 5 cc in each hip and then 2 cc IM after each convulsive seizure. Sodium Amytal 3- $\frac{3}{4}$  gr. IV and Dilantin 2 cc IM were given. The Dilantin was repeated every four hours until the convulsions ceased. Lasix 2 cc was given IV. A catheter was inserted and nasal oxygen started. She had 4+ albuminuria, without glycosuria. She responded to verbal stimuli around 5:30 p.m. when seen by the physician on call. Her tongue was still swollen. Urinary output was good and the fetal heart was heard. Nasal oxygen was continued. Her Hemoglobin was 14.2 gm, Hematocrit 41%. She had another convulsion around 10:45 p.m. Her blood pressure was 170/100 and remained elevated. She

had 500 cc output per Foley. She began convulsing again at 2:25 p.m. on the 26th. The convulsions continued in spite of treatment and she expired at 2:59 p.m. No fetal heart was heard. An autopsy was requested, however the family refused. The final diagnosis was Toxemia of pregnancy, uterine pregnancy undelivered, cerebral anoxia.

### Comments

The Committee classified this death as direct obstetrical with preventable factors by both the patient and the physician. Certainly the patient did not make use of available prenatal care and her disease was uncontrolled when her mother finally brought her in. However, treatment in the hospital was not adequate for the severity of the disease. The following is a brief outline of the protocol used at the University of Kentucky for the past five years.

On admission an IV is started with a large bore intravenous catheter. All medications are given IV because onset and duration of action are much more predictable than with IM use. Lactated Ringer's solution is the fluid of choice. Toxemic patients have a contracted blood volume with hemoconcentration. Urine specific gravity is usually elevated. Intake and urine output is monitored hourly with a Foley catheter in place. IV fluids are infused at 200 ml per hour until urine output is 50 ml/hour or above.

Magnesium sulfate is given IV as soon as the IV is started. One to four grams given slowly are usually sufficient. However, the therapeutic end point is cessation of the seizure and depression of reflexes to 1+. Fifty grams or more in a 24-hour period is not unusual.  $\text{MgSO}_4$  is repeated hourly, 1 or 2 gm, or PRN to keep reflexes at 1+. Hydralazine may be ne-



cessary if the systolic remains above 200 mm Hg. Lasix is rarely necessary but has been used in the presence of oliguria. All vital signs are monitored every 15 minutes and the results recorded. The patient should be constantly attended.

Stability can be reached in four to eight hours. At that time induction by amniotomy and oxytocin infusion is instituted. Cesarean section may be performed if induction is unsuccessful, for the delivery of the fetus is the definitive treatment. The same protocol is followed postpartum until recovery is sufficient that the patient is out of danger.

This means that a patient should be awake and alert enough to help and to complain if new symptoms develop. Secondly, the baby is not sedated and its chances for survival are increased.

---

### Home Eye Tests Available

Physicians may obtain free Home Eye Test kits for parents of pre-schoolers by writing the Kentucky Society for the Prevention of Blindness, 301 Heyburn Building, Louisville, Ky. 40202. The kit employs simple instructions to prepare the parent to give the child the standard Snellen Symbol E Chart Vision Test.

### Acknowledgement Noted

The following acknowledgement was deleted from an article by Michael S. Nall, M.D. and Walter Wilson, M.D., on "Hereditary Angioneurotic Edema," which appeared in *The Journal*, October issue, 1973, pages 657-658: "We would like to acknowledge the assistance of Virginia Donaldson, M.D., at the University of Cincinnati School of Medicine, in diagnosing this patient."

---

**Hollis Johnson, M.D.**, Louisville, was recently named as President-Elect of the Southern Psychiatric Association at their Annual Meeting in October. Doctor Johnson will preside at the 1974 Annual Meeting to be held at Hot Springs, Virginia, October 5-8, 1974.

**Joyce E. Howell, M.D.**, Louisville, has been appointed to serve on the National Cub Scouting Committee of the Boy Scouts of America. Doctor Howell is a pediatric development specialist at the Child Evaluation Center of the University of Louisville.

**Theodore R. Davies, M.D.** and **W. Parker Clifton, M.D.**, both of Barbourville, were recently honored as the "Outstanding Citizens of the Year" in Knox County.

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# Recommendations<sup>†</sup> on Combination Live Virus Vaccines

## American Academy of Pediatrics

### Committee on Infectious Diseases

In the September 15, 1971 AAP Newsletter sent to Academy members, the Committee on Infectious Diseases of the American Academy of Pediatrics stated its recommendations on the use of combination live virus vaccines. After a careful review of available data, the committee concluded that:

- "This information indicates that the products are both safe and effective when used as directed."
- The vaccine "...can, therefore, be recommended with the obvious advantages of reduction in the number of injections for any given child and a concomitant decrease in the required visits to a physician's office or clinic."

<sup>†</sup>For complete text of both recommendations see your MSD representative or write to Professional Service Dept., Merck Sharp & Dohme, West Point, Pa. 19486.

## United States Public Health Service

### Advisory Committee on Immunization Practices

In the April 24, 1971 issue of *Morbidity and Mortality Weekly Report*, the Advisory Committee on Immunization Practices of the United States Public Health Service presented recommendations on the use of combination live virus vaccines. The committee stated that:

- "Data indicate that antibody response to each component of these combination vaccines is comparable with antibody response to the individual vaccines given separately."
- "There is no evidence that adverse reactions to the combined products occur more frequently or are more severe than known reactions to the individual vaccines (see pertinent ACIP recommendations)."
- "The obvious convenience of giving already selected antigens in combined form should encourage consideration of using these products when appropriate."





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### **MSD suggested immunization schedule for well babies**

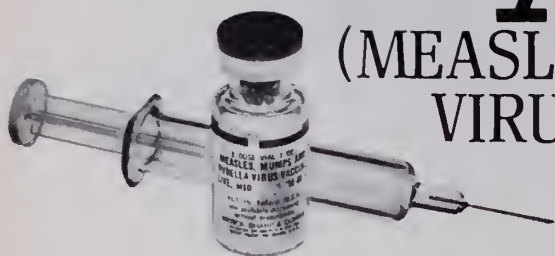
<b>Age</b>	<b>Vaccine(s)</b>
2 months	DPT (diphtheria-pertussis-tetanus) Oral poliomyelitis vaccine (triple)
3 months	DPT <sup>1</sup>
4 months	DPT Oral poliomyelitis vaccine (triple)
6 months	Oral poliomyelitis vaccine (triple)
<b>12 MONTHS</b>	<b>M-M-R (MEASLES, MUMPS AND RUBELLA VIRUS VACCINE, LIVE, MSD)</b>

1. This vaccination may be given at 3 months, 5 months, or at 6 months, depending on your preference or on the condition of the child.

Since vaccination with a live virus vaccine may depress the results of a tuberculin test for four weeks or longer, the test and the vaccine should not be given during the same office visit.

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**For a brief summary of prescribing information, please see following page.**



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**Precautions:** Administer subcutaneously; do not give intravenously. Epinephrine should be available for immediate use should an anaphylactoid reaction occur. Should not be given less than one month before or after immunization with other live virus vaccines, with the exception of monovalent or trivalent poliovirus vaccine, live, oral, which may be administered simultaneously; vaccination should be deferred for at least three months following blood transfusions or administration of more than 0.02 ml immune serum globulin (human) per pound of body weight, or human plasma.

Due caution should be employed in children with a history of febrile convulsions, cerebral injury, or any other condition in which stress due to fever should be avoided. The physician should be alert to the temperature elevation which may occur 5 to 12 days after vaccination.

Excretion of the live attenuated rubella virus from the throat has occurred in the majority of susceptible individuals administered the rubella vaccine. There is no definitive evidence to indicate that such virus is contagious to susceptible persons who are in contact with the vaccinated individuals. Consequently, transmission, while accepted as a theoretical possibility, has not been regarded as a significant risk.

Attenuated live virus measles, mumps, and rubella vaccines, given separately, may temporarily depress tuberculin skin sensitivity; therefore, if a tuberculin test is to be done, it should be scheduled before vaccination, to avoid the possibility of a false negative response.

Before reconstitution, refrigerate vaccine at 2-8 C (35.6-46.4 F) and protect from light. Use only diluent supplied to reconstitute vaccine. If not used immediately, return reconstituted vaccine to refrigerator at 2-8 C (35.6-46.4 F), and discard after eight hours.

**Adverse Reactions:** To date, clinical evaluation has not revealed any adverse reactions peculiar to the combination. The adverse reactions that occurred were limited to those that have been reported previously for the component vaccines.

Fever, rash; mild local reactions such as erythema, induration, tenderness, regional lymphadenopathy; parotitis; thrombocytopenia and purpura; allergic reactions such as urticaria; arthritis, arthralgia, and polyneuritis.

Occasionally, moderate fever (101-102.9 F); less commonly, high fever (above 103 F); rarely, febrile convulsions.

Encephalitis and other nervous system reactions that have

occurred very rarely with the individual vaccines may also occur with the combined vaccine. Experience from more than 44 million doses of all live measles vaccines given in the U.S. by mid-1971 indicates that significant central nervous system reactions such as encephalitis, occurring within 30 days after vaccination, have been temporally associated with measles vaccine approximately once for every million doses. In no case has it been shown that reactions were actually caused by vaccine. The Center for Disease Control has pointed out that "a certain number of cases of encephalitis may be expected to occur in a large childhood population in a defined period of time even when no vaccines are administered. A survey conducted in New Jersey in 1965 showed that 2.8 cases of encephalitis (of unknown cause) occurred per million children, ages 1-9 years per 30-day period." However, the Center for Disease Control has analyzed the reported reactions following measles vaccines and pointed out that "the clustering of cases in the period 6 through 13 days after inoculation as well as the recovery of measles virus (probably the vaccine strain) from the CSF of one patient does suggest that some of these cases may have been caused by the vaccine." The risk of such serious neurological disorders following live measles virus vaccine administration remains far less than that for encephalitis with measles (one per thousand reported cases).

Transient arthritis, arthralgia, and polyneuritis are features of natural rubella and vary in frequency and severity with age and sex, being greatest in adult females and least in prepubertal children. Such reactions have been reported with live attenuated rubella virus vaccines. Symptoms relating to joints (pain, swelling, stiffness, etc.) and to peripheral nerves (pain, numbness, tingling, etc.) occurring within approximately two months after immunization should be considered as possibly vaccine related. Symptoms have generally been mild and of no more than three days' duration. The incidence in prepubertal children would appear to be less than 1% for reactions that would interfere with normal activity or necessitate medical attention.

**How Supplied:** Single-dose vials of lyophilized vaccine, containing when reconstituted not less than 1,000 TCID<sub>50</sub> (tissue culture infectious doses) of measles virus vaccine, live, attenuated, 5,000 TCID<sub>50</sub> of mumps virus vaccine, live, and 1,000 TCID<sub>50</sub> of rubella virus vaccine, live, expressed in terms of the assigned titer of the FDA Reference Measles, Mumps, and Rubella Viruses, and approximately 25 mcg neomycin, with a disposable syringe containing diluent and fitted with a 25-gauge, 5/8" needle. Also in boxes of 10 single-dose vials nested in a pop-out tray with a separate box of 10 diluent-containing syringes.

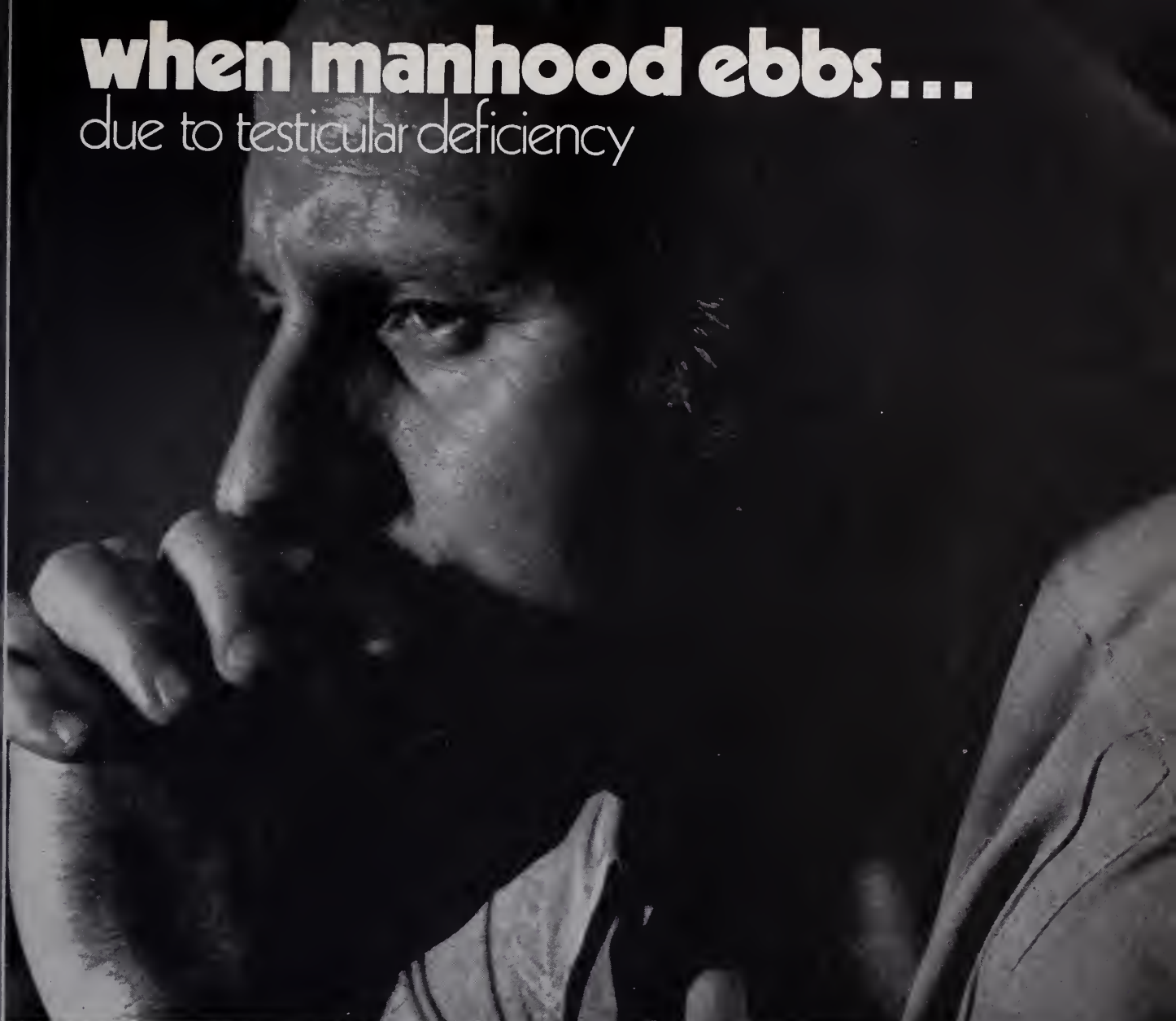
For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486.

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\*Cecil-Loeb. Textbook of Medicine, Vol. II, ed. 13. Beeson, P. B. and McDermott, W. eds. Philadelphia, W. B. Saunders Co., 1971, p. 1816.

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# POSTGRADUATE OPPORTUNITIES



## IN KENTUCKY

### DECEMBER

- 17 "The Killers" series on "Genetic Defects," KET television stations, 8 p.m., EST
- 20 Postgraduate Medical Seminar, sponsored by Norton Memorial Infirmary and American Academy of Family Physicians, 8:45 a.m., Norton-Children's Hospitals, Louisville
- 21-22 Cornea-External Disease Conference; Registration: \$80, practitioners, \$40, residents and fellows; University of Kentucky College of Medicine, Lexington. (For further information contact Ronald D. Hamilton, M.D., Director of Continuing Education, University of Kentucky College of Medicine.)

### JANUARY

- 14 "The Killers" series on "Pulmonary Disease," KET television stations, 8 p.m., EST
- 16-17 Northern Kentucky Seminar, Kentucky Academy of Family Physicians, Ft. Mitchell

### FEBRUARY

- 11 "The Killers" series on "Trauma: It's An Emergency," KET television stations, 8 p.m., EST

### MARCH

- 11 "The Killers" series on "Cancer: The Cell That Won't Die," KET television stations, 8 p.m., EST
- 20-21 Symposium on Cardiovascular Diseases, Heart Association of Louisville and Jefferson County, Stouffer's Inn, Louisville

## IN SURROUNDING STATES

### JANUARY

- 16-17 Postgraduate course, "Gastrointestinal Surgery," Cleveland Clinic Foundation, Cleveland
- 25-27 AMA Leadership Conference, Chicago

### FEBRUARY

- 1-3 AMA Council on Medical Education Congress, Palmer House, Chicago
- 10-16 Annual meeting, American Society of Contemporary Medicine and Surgery, Fontainebleau Hotel, Miami Beach

### MARCH

- 9-10 Felson lecture series, University of Cincinnati College of Medicine, Cincinnati

## SCHEDULE OF UPCOMING PROGRAMS ON NETWORK FOR CONTINUING MEDICAL EDUCATION

(For listing of stations, see October issue, page 676)

### December 17-December 30

**DIAGNOSTIC THORACENTESIS—PRINCIPLES/METHODS**, produced by the Center for Continuing Medical Education, Ohio State University College of Medicine, Columbus, Ohio.

**LYMPHANGIOGRAPHY IN DIAGNOSIS AND THERAPY**, Robin Caird Watson, M.D., Chairman, Department of Diagnostic Radiology, Memorial Sloan-Kettering Cancer Center, and Associate Professor of Radiology, Cornell University Medical Center, New York, N.Y.

**DIAGNOSING COMMON EYE INFLAMMATIONS**, Virginia Lubkin, M.D., Ophthalmologist and Clinical Assistant Professor of Ophthalmology at Mt. Sinai School of Medicine, New York, N.Y.

### December 31-January 13

**THE EXERCISE PRESCRIPTION**, with Nanette K. Wenger, M.D., Professor of Medicine, Division of Cardiology at Emory University School of Medicine, Atlanta, and William L. Haskell, M.D. Physiologist, Stanford University Medical School Heart Disease Prevention Program, Palo Alto.

**SKYLAB: CLINIC IN ORBIT**, with Captain Joseph P. Kerwin, M.D., U.S.N., from NASA headquarters, Houston.

**OFFICE TESTS TO CONFIRM CHRONIC OBSTRUCTIVE LUNG DISEASE**, with Spencer Koerner, M.D., Chief, Pulmonary Medicine, Montefiore Hospital and Medical Center, New York.

## You Might Want to Mark These Dates On Your Calendar

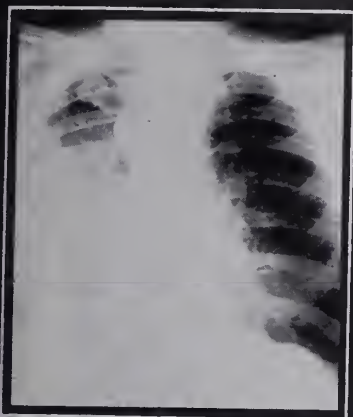
May 15-18 Annual Assembly, Kentucky Academy of Family Physicians, Ramada Inn, Louisville

May 30-31 Emergency Health Care Seminar, Ramada Inn, Louisville

September 23-26 KMA Annual Meeting, Ramada Inn, Louisville



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# The JOURNAL of the Kentucky Medical Association

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No. 12

## Gastroschisis†

HOSSEIN FALLAZADEH, M.D.,\* DONALD M. BUCKNER, M.D.,\*\*  
AND WILLIAM JOHNSON, M.D.\*\*\*

Louisville, Kentucky

*Herein presented is a review of all cases treated at Louisville Children's Hospital bearing the diagnostic criteria of gastroschisis in the last five years.*

**G**ASTROSCHISIS is a rare type of congenital evisceration in which there is a full thickness defect of the anterior abdominal wall. The principal features of the defect are its extra-umbilical location with a normal insertion of the umbilicus at the margin of the defect and absence of the membranous sac covering the eviscerated organs as in omphalocele.<sup>1</sup>

The true incidence of this abnormality is difficult to assess. Moore (1963)<sup>2</sup> was able to collect 31 cases from the literature which satisfied the criteria of gastroschisis. No doubt, many other cases have been lost due to lack of clear and established classifications of congenital evisceration of the abdominal wall.<sup>1,3</sup>

### Material

The present study consists of a review of all cases treated at Louisville Children's Hos-

pital bearing the diagnostic criteria of gastroschisis in the last five years. There were six males and five females. Four babies were two to six weeks premature; all of the babies had sub-normal rectal temperature ranging from 93 to 95 degrees. The delay from delivery to surgery was one to twelve hours.

### Associated Anomalies

All patients had short mesentery and malrotation of the bowel. Three other cases had other anomalies which were noncontributory to the final outcome (Table 1).

Table 1

Short mesentery and malrotation	11
Absent right hand and forearm	1
Rudimentary right ovary	1
Micro-colon	1

### Treatment

All patients were placed on heating pads and the intestines were covered with moist, sterile towels at the time of admission. Patients were immediately taken to the operating room where extraperitoneal bowel was thoroughly irrigated with copious sterile, warm saline. The umbilical cords were ligated and the defects were enlarged in order to replace the bowel in the peritoneal cavity. In eight cases the skin and subcutaneous tissue was mobilized from the coastal margins down to the symphysis pubica and laterally to the posterior axillary line on both sides. The mobilized skin was closed over the bowel using 4-0 interrupted silk. In two of our cases we were able to close

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\*Surgical Resident, University of Louisville Affiliated Hospitals

\*\*Assistant Clinical Professor of Surgery, University of Louisville

\*\*\*Associate Clinical Professor of Surgery, University of Louisville



FIG. 1 Appearance of infant prior to repair of ventral hernia.

the defect primarily. In one case enough skin could not be mobilized and silastic mesh was used to close the abdomen.

Six patients made a good recovery; four with large ventral hernia (Fig. 1). Two of these patients were brought back three years following their primary closure and had repair of ventral hernia (Fig. 2).

Complications following surgery occurred in eight cases (Table II). All cases of intestinal obstruction were treated with nasogastric suction and fluid replacement; in one patient operative intervention was required to free an adhesive band.

Of five patients who died, three had septicemia, two of which developed cardio-respiratory failure. One patient developed infection of wound and dehiscence. In this patient silastic mesh was used to close the defect. She subsequently developed neonatarum scleremia and started to bleed from various sites. In the fifth patient, a 4 lb. premature baby, there was a 12-hour delay prior to transfer of the patient

to our care. He lived six weeks following surgery, but never developed peristalsis and was supported by parenteral hyperalimentation. He developed severe respiratory distress and died of cardio-respiratory arrest.

Table 2

Intestinal obstruction	5
Septicemia	3
Respiratory failure	2
Heart failure	2
Dehiscence	1
Neonatarum scleremia	1
Bleeding	1

### Discussion

Differentiation of gastroschisis from ruptured omphalocele has been made in recent years.<sup>4</sup> Unless a careful examination is made the condition can easily be confused with ruptured omphalocele.

The embryological basis of the defect is the failure of differentiation of embryonic mesenchyme forming the somatopleure of the lateral abdominal wall. Resorption of the ectoderm adjacent to the somatopleure results in the para-umbilical defect; there is no peritoneal-amniotic sac as in the omphalocele.<sup>1</sup> In the absence of the sac the extruded organs develop extra-corporeally immersed in the amniotic fluid containing vernix caseosa, debris and meconium. There is usually a marked reaction of the bowel with enlargement, thickening, cyanosis, infections, and adhesions firmly matting together clusters of bowel loops. The entire abdominal viscera may present as a solid mass with leathery consistency.<sup>5</sup>

The abdominal cavity not required to accommodate the extra-corporeal development of bowel remains small, resulting in a great disparity between the size of the viscera and the peritoneal cavity.<sup>6</sup> There is complete non-rotation of the intestine which is suspended from a common dorsal mesentery.<sup>4,7</sup> The relative disproportion between the eviscerated bowel and the peritoneal cavity seems to draw the line between success and failure of treatment. Until recent years this anomaly was thought not to be amenable to surgery.<sup>5,8,9</sup> Since Gross<sup>10</sup> has popularized the principle of creating a large ventral hernia, followed by subsequent repair, this technique has been used in various degrees of success in the manage-





FIG. 2 Appearance of the patient after repair of hernia.

ment of these patients.<sup>2,7,9,11</sup> In an attempt to decrease the complications of increased intra-abdominal pressure with danger of cardio-respiratory embarrassment, synthetic material to enclose the eviscerated organs in an extra-umbilical sac has been advocated in recent years.<sup>12,13</sup> With these techniques, however, there is the risk of erosion of underlying intestine with fistula formation and infection.<sup>13,14</sup> Adequate decompression and careful replacement is mandatory if further compromises of

cardio-respiratory system is to be avoided. Prolonged ileus of the thickened and edematous bowel is not uncommon in these patients. Expediency and early feeding can result in excessive vomiting and added complication as was observed in two of our patients.

We feel that using skin flaps for closure gives acceptable results without risks associated with foreign material implants.

### Summary

Nine premature babies with gastroschisis were treated with skin flaps and two with primary closure. There were six survivals, four of whom required secondary closure of their ventral hernia. The result obtained using this technique is comparable with those using foreign material implants without added risk of infection and erosion of underlying intestine.

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# Nuclear Medicine and Competitive Binding Radioassays†

JOHN B. SELBY, M.D.\*  
Lexington, Kentucky

*The youthful specialty of nuclear medicine has been involved in the use of radioactive tracer substances which, without administration to patients, are used to measure minute quantities of hormones and drugs which formerly required bioassays.*

WITH the development of "purified hormones" and their isolation, the power of radioactive tracers (Fig. 1) has been greatly increased in the measurement of minute quantities of labeled material. These are detected by highly sophisticated and much more sensitive "scintillation detectors" than previously available. Much of the stimulus to the work in radioimmunoassay and competitive binding radioassay techniques developed from the pioneer work of Berson and Yalow since 1956, with their measurements of plasma insulin. Now virtually every known hormone secreted by man has been quantitated by these techniques which are becoming routinely available to physicians. To appreciate the sensitivity range of modern counting instruments it should be recalled that cortisol, the most abundant hormone in plasma, is present in amounts of only 15 micrograms (mg) per 100 ml and that ACTH, almost four thousand times less by weight, amounts to only 4 nanograms (ng) per 100 ml. The radioisotope or radionuclide selected as the tracer label is most often  $^{125}\text{I}$  or  $^{131}\text{I}$  in present day techniques. The more expensive  $^{14}\text{C}$  a beta emitter has also been commonly used in physiologic studies and by 1956, the preparation of tritium labeled steroids as well as steroid derivatives utilizing  $^{131}\text{I}$  and  $^{35}\text{S}$  had been

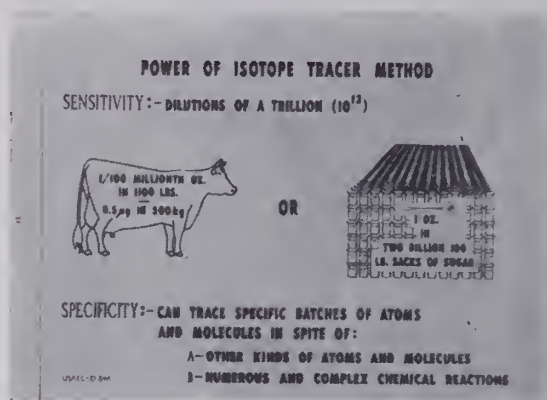


Figure 1

described. Since tritium ( $^3\text{H}$ ) and  $^{14}\text{C}$  are beta emitters, their detection requires the use of a liquid scintillation media rather than the standard sodium iodide crystal which is used as the detector for most gamma emitting radionuclides.

## Principles

The general principle of the competitive radioassay systems is worth reemphasizing and might be compared to a game of "musical chairs." In this well known childhood game, there are a limited number of chairs for which the contestants are competing. In these radioassays, as in the game, there is a constant dynamic equilibrium process occurring with the substance measured being released from binding protein, existing momentarily free in plasma, and then colliding and binding with the unsaturated protein site once again. When the protein binder is a natural carrier protein as in the use of: thyroid binding globulin (TBG), cortisol binding globulin (CBG or transcortin), B-12 binding protein (TcA or transcobalmin) testosterone binding protein (SHBG or sex hormone binding globulin), the technique is referred to as a competitive protein binding assay. The small molecule being bound is usually referred to as a ligand and the process sometimes referred to as a radio-ligand assay.

†Presented at the Spring Scientific Session, Appalachian Regional Hospital group, on April 11, 1973, in Lexington.

\*Chief, Nuclear Medicine Service, Veterans Administration Hospital, Lexington



Today's measurement of serum thyroxine (T-4) is such a system and is frequently referred to as the "Murphy-Pattee Method" or thyroxine by displacement, T-4(D). Since the test does not involve measurement of iodine in any form, this possible contamination is no longer a problem. However, since 99.95% of thyroxine is protein bound, this measurement will be deviated from the normal when there are abnormal concentrations of the T-4 binding serum proteins as in pregnancy and the use of estrogens (hi) and in the nephrotic syndromes (lo). The only common clinical useful radioassay which is truly **non-competitive** is the resin triiodothyronine uptake (RT<sub>3</sub>U). In this procedure the added radioactive triiodothyronine (T-3\*) cannot compete in binding affinity with the T-4 present. The added T-3\* therefore is significantly bound to TBG only when there is an **excess** of TBG as in states of pregnancy or estrogen intake. The T-3\* will otherwise be taken up by the alternative binder used for separation and this is most often a resin (but could be charcoal, sephadex, etc.). The T-3\* resin uptake value (RT<sub>3</sub>U) is **low** therefore when the TBG is in **excess**. The T-3\* resin uptake is **inversely** related to the level of TBG or natural binding protein. Since T-4 is normally bound to TBG and will also increase directly when TBG is increased, the T-4 value will vary up or down in proportion to the abnormal TBG value. If the RT<sub>3</sub>U test is performed simultaneously it will vary inversely with TBG levels and can be used to correct an abnormal TBG level. An "adjusted total thyroxine" value is: a product of the measured RT<sub>3</sub>U value, and the serum T-4 level. For example:

$$\text{Normal (Av) } \frac{\text{RT}_3\text{U}}{\text{RT}_3\text{U}} \times \text{T-4(D)} = \text{Thyroxine resin T-3 index}$$

And e.g.  $\frac{20\%}{30\%} \times 15 \text{ ug/100 ml} = 10 \text{ ug}$   
(T4-RT3 index or "adjusted T-4")

Most physicians have trouble knowing what thyroxine or thyroid tests they are ordering (Fig. 2).

The RT<sub>3</sub>U test has less value as a single screening test, but can correct for most of the falsified values in the serum T-4(D) result. For all displacement and competitive protein binding

Figure 2

#### SIMILARITY OF NOMENCLATURE OF IN VITRO TESTS OF THYROID FUNCTION

Thyroxine  
Thyroxine by column  
Thyroxine by displacement

Free thyroxine  
Free thyroxine index  
Free thyroxine, absolute

Resin T-3 uptake  
Resin uptake  
Resin uptake ratio  
T-4-Resin T-3 index

assays (CPBA), and radioimmunoassays (RIA) except the RT<sub>3</sub>U, a standardized curve is the first essential using known quantities of purified material.

The radioimmunoassay (RIA) employs an **antibody** instead of the natural carrier protein as the principle binding site (Fig. 3). Antibodies have now been prepared against all polypeptide hormones including such small polypeptides as antidiuretic hormone (molecular weight 1080), and angiotensin II (mol wt 1170). Using conjugates, antibodies have been prepared against many steroids, e.g., estradiol, as well as drugs, e.g., digoxin, digitoxin, morphine; and the end is not in sight.

In all RIA or competitive binding radioassays there is an **excess** of antigen. The principle binder or antibody is limited (Fig. 4) and it is the ratio of bound to free or vice versa that determines the measure of the unknown in question. The binding capacity of the system is **limited and constant**. Therefore, the more unlabeled hormone present in the plasma sample, the less our radioactively labeled hormone will be bound to the antibody. This ratio with successive gradations of known puri-

Figure 3

#### CHARACTERISTIC BINDING PROTEINS

	Transport Protein	Tissue Recept.	Serum a-b
Conc. in source	lo	lo	hi
Prep. time	Minutes	Hours	Months
Method	(dil)	(cell cx)	(immunize & charact.)
Storage Stability	Months*	Minutes	Years*
Specificity	hi	hi	Prob. highest
Constancy	In species	In species	Vary c prep.
Binding rate	Rapid	Med.	Very slow
Incub. time	(Min, near 15")	(Hrs.)	(Days)
Relation to Biolog. act.	hi	Very hi	Nil

\* If not repeatedly frozen and thawed, store small aliquots and throw out residuals after "run".

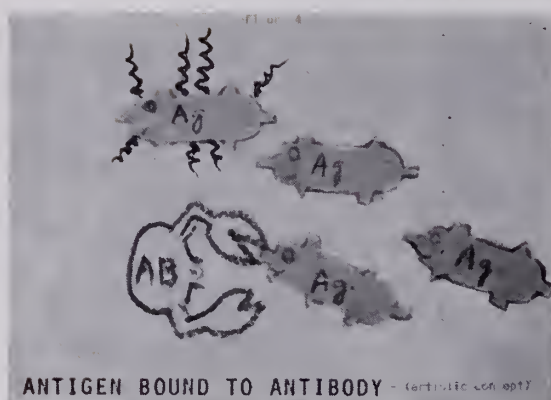


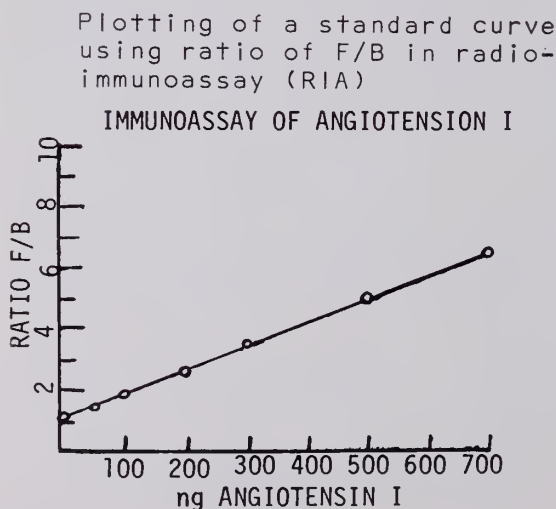
Figure 4

fied material is plotted to produce a standard curve (Fig. 5): once the standard points are plotted, the unknown ratio can be read off from the graph in unit measurements.

Obviously if the assay system depends upon a competition between our tracer material and the unlabeled material for a specific binder, we must then separate the bound from the unbound in a second step process. There are innumerable ways to do this and most "kit" variations are related to this maneuver. In T-4(D) assays the Abbott Company employs an anion exchange resin to pick up the stray or "free" labeled T-4.

In RIA the bound antigen-antibody complex may be precipitated out by an anti-rabbit gamma globulin or organic solvents. Other techniques separate "free" (unbound) from bound tracer using the differential migration of electrophoresis, gel filtration, sephadex, charcoal, or dialysis.

Figure 5



### Tracer Preparation

All tracers are properly labeled to the substance in question and this technique is constantly being improved and refined commercially. Most large hospital laboratories, however, can "label" their own protein hormones with  $^{125}\text{I}$  or  $^{131}\text{I}$ . For steroids,  $^{14}\text{C}$  or  $^3\text{H}$  labeling is usually used and may be obtained from commercial sources quite free of significant damaged hormone. One is always concerned about the quality as well as the proper labeling of the hormone used.

### Applications

The growing list of substances measured by competitive radioassay binding techniques makes any laboratory hesitant in deciding whether we have a blessing or a monster on our hands (Fig. 6). Clinical applications are

Figure 6

COMPOUNDS FOR WHICH RADIOASSAY IS CURRENTLY AVAILABLE

ACTH	Gastrin
Angiotensin	Glucagon
Aldosterone	Growth Hormone
B-Melanophore-stim. Hormone	Hepatitis B Ag. (HAA)
Bradykinin	Luteinizing Hormone
Calcitonin	Morphine
Carcino-Embryonic ag. (CEA)	Oxytocin
Chorionic Gonadotropin	Parathormone
Digoxin	Placental Lactogen
Digitoxin	Prolactin
Estrone-Estradiol	Testosterone
Folic Acid	Thyrotropin
Follicle Stim. Hormone	Vitamin B-12
	Vasopressin

already obvious for those pituitary hormones such as follicle stimulating hormone (FSH), luteinizing hormone (LH), and human growth hormone (HGH) for which only cumbersome bio-assays were previously available. Digoxin, a commonly used, and frequently encountered drug causing "toxicity" symptoms is another obviously useful assay. Where can we assign such less secure procedures as the determination of gastrin and glucagon, and of T-3 and testosterone? Specialized interests will demand only limited specialized laboratory service until the procedure develops a more general interest and need. Although serum parathormone levels should be exciting and clinically useful, there are procedural problems in measuring a substance not yet available in a "pure" form from human sources. There is no doubt that the specificity and techniques as well as their number will grow with time. The newest, clinically valuable addition to the field is the RIA of the hepatitis-B or long incubation hepatitis antigen, sometimes referred to as the Australian antigen



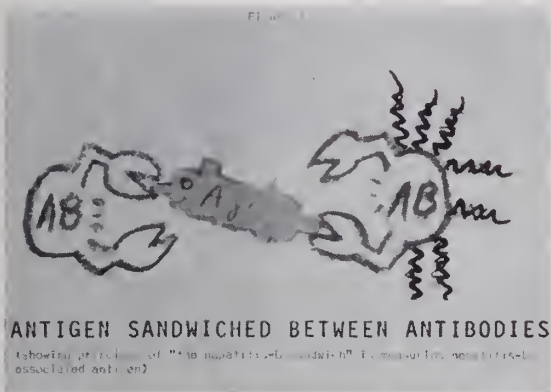


Figure 7

and hepatitis associated antigen (HAA). This abnormal protein can be detected by a sensitive RIA at least 100-200 times more often than by other popular laboratory methods. It is present in about 0.1% of Americans and is a good index of recent infection with the serum hepatitis (type B) if tested during the incubation period or first two weeks of the disease. Unfortunately, like most antibody methods, it requires a long 18-24 hour period of incubation before answers are available. The Abbott® Kit uses a coated antibody tube which will pick up the antigen if present in the serum samples. The later addition of radioactivity labeled antibody will produce a tightly bound "sandwich reaction" within the tube (Fig. 7) which cannot be easily removed. High "tube counts" then would indicate presence of the radioactive labeled antibody and a "hepatitis B sandwich".

Control and negative tubes would have low counts after washing or pouring of the tubes.

Thyroid testing has become even more sophisticated with the development of RIA for the thyrotropin releasing factor (TRF) of the hypothalamus as well as thyrotropin or thyroid stimulating hormone (TSH) of the anterior pituitary. Now with low levels of circulating serum thyroxine, we can determine if the primary fault lies in the thyroid itself or is secondary to pituitary disease.

Many have felt that the best bio-assay is one that is no longer necessary. With the specific and quantitative nature of competitive binding radioassays we are fast approaching this series of events. Further improvement in specificity may occur with the development of assays using specific tissue receptors rather than a less specific antibody or binding protein.

### Summary

Competitive binding radioassays have been developed for most hormones as well as a host of unrelated drugs, enzymes, and miscellaneous substances. Their validity has been amply verified and their sensitivity approaches a range (billionths of a gram or  $10^{-9}$  gm or nanogram) previously undreamed of in standard chemical procedures. Their use will have to be selective on a clinical basis, but they have already simplified our diagnostic accuracy in such diverse fields as thyroid disease, digitalis toxicity and serum or type B hepatitis.

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*Manuscripts should be submitted in duplicate to The Journal of KMA, an original copy and one carbon, and typed with double spacing. Maximum length of an article should not exceed 4500 words; the Board of Consultants on Scientific Articles prefers that they be briefer than this when possible.*

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### The Current Management of Adult Onset Diabetes Mellitus

RONALD D. HAMILTON, M.D.\*

IT is indeed a challenging thought to even consider preparing an article regarding such a controversial subject as the management of diabetes mellitus. As you well know, the center of this controversy is whether we should strive for excellent control of the blood sugar, and if so, does it prevent or significantly reduce morbidity and mortality. Quite naturally, statements in this article will relate to the author's views and will not necessarily conform to many others.

Although the clinical syndrome of diabetes mellitus probably was recognized as early as 1500 B.C. and recorded in the Ebers Papyrus, the etiology of the primary disease state is still unknown and speculative. The condition as a whole seems to be related to an absolute or relative deficiency of available insulin. Carbohydrate intolerance as well as lipid and protein abnormalities are present in most cases. In fact, if the carbohydrate abnormality had not been recognized initially, diabetes mellitus might well have been described first as a primary defect involving lipid or protein metabolism. In most affluent societies three to ten per cent of the total population eventually develop diabetes mellitus, and this prevalence increases with age.<sup>1</sup> Thus, we are dealing with a disease state of epidemic proportions and therefore we should develop a systematic individualized approach to this particular patient population.

The popular belief in the past of factors interfering with the action of insulin<sup>2</sup> may still be important in some cases, but most attention is now being directed in favor of a primary defect within the pancreas.<sup>3</sup> With the development of insulin assay techniques, variable levels of insulin have been found in diabetic

subjects ranging from very low, or undetectable (juvenile), to extremely elevated. Other diabetics may only show an initial delay in the release of insulin following carbohydrate or protein intake.

The diagnosis of diabetes mellitus should be established according to the report of the Committee on Statistics of the American Diabetic Association published in 1969.<sup>4</sup> Although most endocrinologists, including the author, have attempted to regulate the blood sugar to values approaching normal, there had not been any good definitive evidence that this was of benefit until recently. The following have now suggested that control may be of value: (1) an overactive sorbitol pathway in the presence of hyperglycemia,<sup>5</sup> (2) associated hyperlipoproteinemias, (3) excess glucuronic acid formation,<sup>6,7</sup> and (4) increased susceptibility to infections.<sup>8,9</sup> The above would seem to justify an attempt at better regulation of blood sugar. Because of the limited amount of space available for this article, details concerning the above abnormalities cannot be considered in detail. The remainder of the content will be devoted to the diabetic diet, sulfonylureas, insulin and some newer exciting developments which may soon become available.

#### Diabetic Diet

The question frequently arises concerning the type of diet the diabetic patient should follow. Despite the fact that we have been ordering specific diets for years, the author is still not convinced that we have an ideal diet for all patients. Perhaps we were intended, as suggested by Neel,<sup>10</sup> to go through periods of feast and famine.

Even though controversy also still exists here, the dietary approach should be the first line of attempt to control carbohydrate intoler-

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ance unless the patient has an immediate need for insulin, or presents with diabetic keto-acidosis. The most popular approach has been directed toward returning the obese diabetic to his ideal lean body weight, and in the non-obese diabetic to use some form of food groupings. The most widely used type of diabetic diet is the exchange list developed as a combined effort by the American Dietetic Association, the U.S. Public Health Service, and the American Diabetic Association. Even though this diet plan has been available since around 1950, it still is a basis for confusion to many patients. A survey conducted in 1968<sup>11</sup> revealed that roughly 50% of the diabetic population was making no attempt to follow a diet. Out of this total group, approximately 50% were never given a diet, while the other half had received it but did not follow it.

Dietary instructions must take into consideration important factors such as educational background, economic status, physical activity, and associated disease states. If the patient is obese, carbohydrate intolerance can oftentimes be returned to normal, or greatly improved, by weight reduction. This requires motivation and "willpower" by the patient as well as close follow-up and enthusiasm on the part of the physician for best results.

There are a number of weight charts<sup>12</sup> and nomograms<sup>13</sup> available for calculating the patient's ideal weight. A close approximation of ideal weight in medium-framed individuals can be calculated by allowing 100 pounds for the first five feet, and five to six pounds for each inch above this in females and males respectively. The basal caloric requirement can be fairly closely estimated by multiplying the ideal weight figure by a factor of ten. Caloric adjustments must then be made according to whether the patient is sedentary, or has mild, moderate, or marked physical activity. Most diabetic diets allow for 40% of the total caloric intake as carbohydrate, 1.0 to 1.25 gm of protein per Kg of ideal weight, and the remainder of calories in the form of fat. In our particular patient population, we often have to modify the dietary prescription to take into consideration other disease states such as congestive heart failure, renal disease, gastrointestinal problems and, in particular, underlying primary or secondary lipid abnormalities.

Of course, the ultimate goal which we strive for is a normal, or reasonable, fasting blood sugar (150 mg %) and a post-prandial blood sugar between 160 mg % and 180 mg % (plasma or serum value for blood sugar). If the blood sugar is not extremely elevated, an adequate period of time, usually five to six weeks, is allowed to see if the patient can be controlled with diet alone. If there is no response to this trial, we then continue the diet and proceed as subsequently outlined. In an insulin-requiring diabetic, the author divides the total caloric prescription to include a bedtime snack. It may also be necessary in certain individuals to have them snack in mid-morning or mid-afternoon to avoid a more complicated insulin program.

### Sulfonylureas

Oral hypoglycemic agents have been widely used in the treatment of adult onset diabetics since their introduction in the mid 1950's. However, they are now surrounded by marked controversy in view of the University Group Diabetes Program.<sup>14,15</sup> This project was a cooperative attempt of 12 university clinics to study the effect of tolbutamide, placebo, phenformin, insulin standard dose, and insulin variable dose over a period of years. It is simply beyond the scope of this article to deal with all the pros and cons of this study. The results are considered debatable by some and accepted by others. In view of this, a few remarks seem justified.

The findings suggested that tolbutamide and diet may be less effective than diet alone, or than diet and insulin, at least insofar as cardiovascular mortality is concerned. There seemed to be evidence that patients treated with tolbutamide had a higher risk of cardiovascular mortality. This latter finding was also later extended to include a group of phenformin treated patients.

Several authorities<sup>16</sup> feel that the group studied was unrepresentative of both the general and diabetic population. They state that the overall mortality was not statistically in excess in the tolbutamide group as compared to the placebo group. The cardiovascular mortality was certainly not uniform among the clinics, as two clinics reported 22.2% of the total number of patients, 47% of the total

deaths and 50% of the cardiovascular deaths. Tolbutamide was also administered as a standard dose of 1.5 gm daily in divided dosage, and this may have important implications.

Two additional studies by Paasikivi<sup>17</sup> (using tolbutamide in survivors of first myocardial infarctions) and Sharp and associates<sup>18</sup> present data of a conflicting nature and widely divergent conclusions.

Another important aspect of these compounds is that, although they all stimulate insulin release from the pancreatic beta cell as well as numerous other proposed actions,<sup>19</sup> there are different actions among the groups. Tolbutamide and chlorpropamide have an antidiuretic action, whereas acetohexamide and tolazamide enhance water excretion.<sup>20</sup> Because of this it cannot be stated with absolute certainty that the information above applies to all the sulfonylureas.

Needless to say, additional long-term, well designed follow-up studies are a necessity to carefully evaluate each of the presently available sulfonylureas. These compounds are still being used in many medical and diabetic clinics across the country. The author is still using these compounds but somewhat on a more selective basis than previously and certainly not in any patients with adequate dietary control, severe liver or renal disease, pregnancy, or patients with normal fasting blood sugars. In view of the above, it must be remembered that insulin can also be dangerous if not used properly.

#### Clinical Use of the Available Insulin Preparations

It has now been over 50 years since Banting and Best<sup>21</sup> successfully administered a pancreatic extract and demonstrated a significant reduction in the blood sugar concentration. Since then, several types of insulin have been developed and are generally regarded as rapid, intermediate, and prolonged acting. In order to be optimally effective, one must be aware of the timing and intensity of each insulin preparation, individualize the dosage to fit the patient's needs and have adequate follow-up at regular intervals.<sup>22</sup>

The patient should be educated in regard to hypoglycemic and ketoacidosis symptoms. Instruction regarding the testing of freshly voided (second sample) urine samples qid (a.c. and

h.s.) for sugar and acetone (if not well regulated) should also be incorporated into the educational program. Approximately 80 to 85% of adult onset diabetics can probably be controlled with a single morning injection of an intermediate acting insulin preparation such as Lente or NPH. There is no definite advantage in starting a newly detected diabetic with so-called "sliding scale" regular insulin. The author arbitrarily initiates therapy with an intermediate acting insulin in the dosage of 16 to 25 units, depending on the initial blood sugar level. It is then gradually increased until a urinary or blood sugar pattern is established. If intensified therapy is needed in the late forenoon and early afternoon, regular insulin may need to be added to the intermediate form and may be mixed in the same syringe. If intensified action is needed during the night and early forenoon, a combination of Ultralente and Lente can be given, or two injections of Lente or NPH (one in the morning and one before the evening meal). Usually it is best to give no greater than 25-35% of the split dosage program at the evening time.

Insulin preparations used over the years have contained a number of impurities which have recently been eliminated. Since mid 1971 all Lilly insulin manufactured has been so-called "single peak", and all insulin from this company carrying an expiration date after November 1, 1974, is "single peak" indicating a more purified product.<sup>23</sup> This preparation has been extremely successful in eliminating the problems of insulin lipodystrophy which can oftentimes be corrected by injecting the insulin directly into the atrophic area. A "single-component" insulin which is 99% pure insulin is also available in limited quantities from the above company.

In order to avoid prolonged confusion, insulin is now being manufactured in a U-100 concentration.<sup>24,25</sup> Patients seem to understand the concept of concentration better, and the author has already substituted the latter concentration in all diabetics being followed personally. U-40 and U-80 concentration will gradually be phased out over the ensuing years.

In managing the obese diabetic patient, the administration of insulin often leads to excessive caloric intake, increased conversion of glucose to fat, and increased obesity and de-



creased insulin sensitivity. In many instances, the dosage is increased more and more, and the patient gains more weight while "eating up" the insulin administered. The importance of the diabetic reduction diet here is obvious. So-called "brittle" diabetes is unusual. Most patients presenting with control problems will eventually be found to be receiving too much insulin and getting a "rebound" elevation of the blood sugar, or urine sugar, at various times during the day (the so-called "Somogyi effect"). The problems of insulin resistance, insulin allergy, ketoacidosis, and the management of pregnancy and surgery in the diabetic will not be commented on due to the lack of space.

### **Pancreatic Transplantation, Islet Cell Transplants and the Artificial Pancreas**

#### **Pancreatic Transplantation**

A number of reports have described transplantation of the whole pancreas.<sup>26,27</sup> The current status of clinical allotransplantation of the pancreas as a combined pancreaticoduodenal graft have recently been described by Lillehei and associates.<sup>28</sup> This operation has been performed on at least 13 patients with 12 months being the longest survival time of the graft and patient. Immunosuppressive therapy was necessary in these patients, and this in itself presents numerous problems and hazards. Despite the withdrawal of insulin injections and the use of steroids in immunosuppressive doses, blood sugar levels reached essentially normal levels in 24-48 hours. Although the transplanted pancreas can function with respect to insulin secretion, the risk of life and total cost of this procedure at the present time seem to make it prohibitive.<sup>29</sup> Surely we will hear more about this exciting venture as our knowledge of host response and rejection advance.

#### **Islet Cell Transplants**

It has been discovered that new beta cells can arise by one of three ways: (1) replication of existing mature cells, (2) transformation of other types of mature cells and by (3) stem cell differentiation.<sup>30</sup> Lillehei has attempted to implant fragments, slices, and tissue cultures of pancreas or islet cell tumors.<sup>27,28</sup> Human islet cells have been isolated by

various methods and continue to secrete insulin in vitro in response to glucose. Islet cell adenoma cultures are also being evaluated by Chick<sup>30</sup> and Steiner's groups.<sup>30</sup> Ferguson and Scothorne<sup>31</sup> have shown the feasibility of transplanting isolated pancreatic islets in guinea pigs. Intra-omental allografts were all alive when recovered at intervals from 10 days to 11 weeks. Intratesticular isografts between Duncan Hartley guinea pigs from a closed colony survived for periods up to 90 days without any evidence of lymphocytic infiltration. As this research progresses, others are devoting effort to the "artificial pancreas."

#### **Artificial Pancreas**

As can readily be seen from past experience, the current modes of treatment of diabetics require improvement. The "artificial pancreas" is simple enough in concept. With a sensor electrode measuring the blood glucose constantly, or at intervals, this information could be programmed into a miniature computer. This, in turn, could instruct an infusion pump with a reservoir system to release desired controlled levels of insulin into the diabetic's circulation. Two types of electrodes are now being evaluated. The glucose oxidase/oxygen probe by Bessman and Schultz<sup>32</sup> at the University of Southern California and the glucose/fuel cell probe by the Soeldner group<sup>33</sup> in Boston at the Joslin Research Laboratories. Neutral regular insulin<sup>34</sup> (NRI) which has recently been developed circumvents the problem of previous instability of regular insulin at room or body temperature. Other problems exist with regard to programming the computer, but with more knowledge regarding actual beta cell function and the dynamics of insulin secretion, these too will eventually be overcome.

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Charles C. Smith, Jr., M.D., Scientific Editor  
The Journal of the Kentucky Medical Association  
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## GRAND ROUNDS



The University of Kentucky College of Medicine

This Journal feature will be presented alternately by the University of Louisville and the University of Kentucky Departments of Medicine and Departments of Surgery. We hope to have these features revolve around subjects of immediate practical interest to the practicing physician; and, for those of us not able to attend grand rounds in the teaching centers as often as we might, we hope this will represent a bit of a refresher course.

### Chemotherapy of Multiple Myeloma

IN the last several years there has been increasing interest in multiple myeloma. The development of effective chemotherapy has done much to improve the life of the patient with this disease. Laboratory work on cell kinetics has permitted a rational approach to treatment and has guided clinical trials of new agents and combinations. This review attempts to clarify those aspects of this new information that are of greatest importance to the practicing physician.

Chemotherapy is usually instituted as soon as the diagnosis of multiple myeloma is made. The diagnosis requires the presence of an abnormal serum or urinary protein, the presence of increased numbers of plasma cells on bone marrow aspirate, lytic lesions on bone films, or histologic confirmation of the presence of a plasmacytoma. Any two of the four above criteria are generally considered to be sufficient, provided there is not an additional disease process that could account for such findings. Again, once the diagnosis can be established, treatment with cytotoxic agents is instituted.

In order to adequately evaluate current chemotherapy, it is necessary to know something about the natural history of the disease. In 1960, Osgood carried out a retrospective review of the charts of 600 patients with multiple myeloma who received only supportive therapy.<sup>1</sup> He found that these patients had a median survival of seven months. At about this same time Holland published results of his urethane study.<sup>2</sup> This study contained a group of patients treated with a placebo, and these patients had a median survival of 11.5 months. Both studies have their flaws, but they suggest that patients with multiple myeloma treat-

ed only with vigorous supportive therapy will have a median survival of one year or less. A study by Alexanian *et al.* divided patients into a group that responded to chemotherapy and a group that did not.<sup>3</sup> The patients who responded had a median survival of 41 months while those who were treated but did not respond had a median survival of nine months. This and other work indicate that the median survival of untreated patients and those who do not respond to therapy will be similar, slightly less than one year.<sup>3</sup> The median survival of responders will be in the neighborhood of three years, a gain of two years when compared to the natural course of the untreated disease.

Initial evaluation of a patient can provide important predicative information about the kind of response that he will have. Severe disease with hypercalcemia, azotemia, leukopenia, or thrombocytopenia is associated with a poor prognosis.<sup>4</sup> Much can be learned by carefully following the patient during the first several weeks after the institution of treatment. A good response would be considered to occur with decrease in abnormal serum globulins by 50%, decrease in amount of urinary protein by 50%, increase in hemoglobin level by 2 gm%, and decrease in percentage of plasma cells in the bone marrow by 50%.<sup>4</sup> Eighty-five percent of the patients who demonstrate a response will respond in the first 12 weeks of therapy.

The character of the abnormal protein produced by the myeloma cells can be of help in predicting a patient's response to therapy. Approximately 25% of patients will have isolated Bence-Jones proteinuria as their only immunoglobulin abnormality.<sup>5</sup> These Bence-Jones pro-

teins constitute the light chain portion of immunoglobulins, and because of their small size, they are filtered by the renal glomerulus, impairing renal function. Patients who have Bence-Jones proteinuria as their only immunoglobulin abnormality have a high incidence of renal damage with impaired survival.<sup>6</sup> The light chains can be divided into two separate antigenic types, kappa and lambda.<sup>7</sup> Only one type will be present in a single myeloma patient. Available evidence suggests that the presence of the lambda chain is more ominous, apparently related to its greater ability to produce renal injury.<sup>6</sup>

There are five separate types of immunoglobulin: IgG, IgA, IgM, IgD, and IgE. The abnormal myeloma protein or M-protein may represent abnormal proliferation of cells producing any one of these immunoglobulin types. All of the myeloma proteins present in a single patient will be of identical structure.<sup>5</sup> The most common types of M-protein are either IgG or IgA. The rare IgM myeloma has a poor prognosis because of its association with the hyperviscosity syndrome.<sup>8</sup> IgD myeloma is a particularly aggressive disease of young people in which extrasosseous plasmacytomas are seen and response to therapy is poor.<sup>9</sup> IgE myeloma is rare and its course is poorly understood, although two of three reported cases have had plasma cell leukemia.<sup>11</sup>

The chemotherapy of multiple myeloma has been extensively studied in recent years. Prior to 1960, there was little optimism about treatment. It was thought to be quite resistant, much as acute myelocytic leukemia is considered today. Many agents and combinations of agents had been tried and there was little to suggest that any of these were of significant help to the patient. When melphalan (Alkeran) was first introduced, it was thought by many to be another unsuccessful approach to an unapproachable disease. However, evidence rapidly accumulated that established its efficacy in the treatment of myeloma.

Initial studies were centered around determining the best mode of administration. A dispute that continues to the present is whether continuous or intermittent therapy is better.<sup>6</sup> Evidence accumulated that substantial improvement could be made by adding prednisone but this too has not been completely resolved.<sup>4,6</sup> The regimen recommended by Alex-

anian utilizes four day pulses of therapy administered every six weeks. The medicines are taken orally, melphalan in a dose of 0.25mg per kg per day and prednisone in a dose of 2mg per kg per day, on each of the four days.<sup>6</sup>

Available studies suggest that cyclophosphamide (Cytoxan) is as effective as melphalan.<sup>10</sup> Its side effects have discouraged its use in many centers. It has a tendency to produce baldness and hemorrhagic cystitis, and active metabolites are excreted in the urine. It is difficult to know how to adjust the dose in the presence of renal failure, and renal failure is a persistent problem in myeloma.

Evidence has accumulated which indicates that the amount of abnormal protein in the blood or urine correlates with the tumor mass.<sup>12</sup> Effective chemotherapy inhibits abnormal protein production and is a marker that indicates whether or not therapy is achieving its goal. Failure to reduce the abnormal protein strongly suggests that the treatment employed is unsuccessful, and an alternative therapy should be instituted. Drug doses can be increased or a change in alkaline agent can be made, e.g. cyclophosphamide can be substituted for melphalan.<sup>3</sup> Drug therapy that does not inhibit protein production only constitutes a toxic insult to the patient and does not affect survival. The same applies to the patient under treatment. A rising M-protein spike means that therapy must be altered.

From a practical standpoint, the experience at the University of Kentucky suggests that the intermittent Alexanian protocol described above permits patients to be treated successfully with a minimum of expense. The melphalan can be safely administered to patients with WBC counts greater than 3,500 and platelet counts greater than 75,000. The patient need not return for six weeks, when the next course of therapy is required. At this time complete blood and platelet counts are performed and a repeat course of therapy is given if the counts are satisfactory. At the time of the third visit, blood or urine is obtained for determination of serum protein or 24-hour urinary protein excretion. If comparison with pretreatment values indicates improvement, then the therapy is continued. The therapy is only altered when there is evidence that it is no longer effective as indicated by rising serum or urinary protein levels, or by evidence of extension of bony lesions on x-ray.



Because of the potential for renal damage, especially in the initial stages of treatment when cell lysis causes uric acid release, patients are placed on allopurinol therapy for the first three courses of chemotherapy. Adequate hydration is mandatory. Radiation therapy is utilized for painful bony lesions since only approximately 15% of these lesions will respond to chemotherapy.<sup>6</sup> The patient is encouraged to ambulate to help maintain skeletal mineralization, and hypercalcemia is treated promptly when it develops.

This approach has permitted the successful treatment of many patients with only infrequent visits to the clinic or family physician. The patient's life expectancy is prolonged without requiring major alteration of his daily life schedule.

PETER UNGARO, M.D.

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## Codex Atlanticus

"The age as it flies glides secretly and deceives one another; nothing is more fleeting than the years, but he who sows virtue reaps honor.

"Wrongfully do men lament the flight of time, accusing it of being too swift, and not perceiving that its period is yet sufficient; but good memory wherewith Nature has endowed us causes everything long past to seem present.

"In youth acquire that which may requite you for the deprivations of old age; and if you are mindful that old age has wisdom for its food, you will so exert yourself in youth, that your old age will not lack sustenance.

"While I thought that I was learning how to live, I have been learning how to die.

"Life well spent is long."

—Leonardo Da Vinci

*This tribute is printed in memory of the Kentucky physicians who died during the past year.*



## Deceased Kentucky Physicians

1973

George Preston Archer, Prestonsburg	Clifton D. Lamm, Bloomfield
Bert C. Bach, Whitesburg	Presley Frank Martin, Louisville
John Coldiron Baker, Berea	David Griffin Miller, Jr., Morgantown
Orville Lee Ballard, Louisville	Oliver P. Miller, Columbia
Lawrence Francis Boland, Georgetown	Howard Robert Molony, Covington
Steve Hansford Bowen, Harlan	Charles H. Moore, Huffman, Texas
Virginia L. Congleton, Frankfort	Escum Lionel Moore, Lexington
Guinn Shaw Cost, Hopkinsville	E. D. Mudd, New Haven
William Moss Cox, Corbin	Paul Claude Neely, Louisville
Garland Lambuth Dyer, Louisville	James Franklin Norwood, Hardin
L. Irvin Farmer, Somerset	Clarke P. Pennington, Sarasota, Fla.
J. F. Furnish, Taylorsville	W. Mountjoy Savage, Murray
George A. Glenn, Lexington	Ronald Lee Sergeant, Lexington
Elmer B. Hacker, Louisville	Samuel S. Shouse, Lexington
Charles W. Harting, Kevil	Harold B. Simms, Springfield
Ben Harvey Hollis, Louisville	John P. Simpson, Whitley City
Elton Rudolph House, Henderson	Adam Stacy, Jr., Pineville
Walter Irvin Hume, Sr., Louisville	Harris W. Terrell, Corbin
John Evan Johnston, Nortonville	Adriel Clark Weakley, Shelbyville
William A. Johnson, Frankfort	Francis Droit Willey, Versailles
Edwin L. Jones, Mt. Sterling	

*List of names of deceased physicians available to The Journal as of November 10, 1973.*



## EDITORIALS



### Frames of Reference

**T**HIS year Christmas will, we hope, bring a respite from the seemingly unending procession of distractions, disillusionments, and crises to which we've all been witness during the year past. Human nature is inherently cyclic; we can sustain moods—excitement, anger, depression, affection, whatever—only for a while at a high pitch, then, as an individual or a nation, we need a time to ease off, to slow down our engines, to contemplate just what it was that had us so aroused. So let it be this Christmastime for us all. Events of undeniably serious import will in all likelihood continue to flood in on us, undiminished, but may the peace and joy of the season lengthen and soften our frames of reference so that we may learn to understand, rather than just criticize, and realize once again that our individual obligation is to act, rather than just react.

Kentucky medicine has acted well indeed this year, with its physicians facing up to the continuing challenges of consumer groups and government in such fields as PSRO, HMO, price freezing at a punitive level, comprehensive health planning, etc. While dealing with all these unique (and sometimes discriminatory) problems, Kentucky doctors have continued to care for their patients with that balance of wisdom and compassion that is at once their prime responsibility and their strongest asset.

This high quality care would not be possible, were we not blessed with active and alert officers in our state Association, for it is their hard work and many long hours of tedious committee meetings that enable the rest of us to subsist in a rapidly changing medical environment—they point out to us courses we need

to adopt to meet valid health care needs, and educate others, wishing to change us at their whim, to the realities of modern medical care. In particular this year, we should recognize the achievements of the Kentucky Foundation for Medical Care, which has dealt in a most statesmanlike manner with the initial concept of PSRO in this State.

*The Journal* owes, as usual, many thanks to many people for helping it through the years. The authors of our scientific articles, "Grand Rounds" and "Medical Progress" symposia, all have brought to us current concepts in treatment of disease. Our scientific consultants have been, as always, our quality monitors, and we appreciate their largely unsung labors.

For their advice and counsel, we extend our appreciation to the administration and faculty of each of the medical schools in Kentucky. They form a base upon which our medical culture, heritage and education can grow, and they have been consistently helpful and cooperative. For this pleasant relationship we are grateful.

To the companies whose advertising has been presented on these pages, we offer our thanks for their confidence and support. Such support enables us to present, with reasonable economy, the ongoing story of Kentucky medicine to its participants—you, the physicians of this State. We appreciate that opportunity.

To all these people—to all involved in any way in the fascinating and complex process of medical care in Kentucky this past year—we say well done. Thank you for your efforts. May your frustrations diminish and your peace of mind increase.

WHj

MERRY CHRISTMAS



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## ORGANIZATION SECTION



### **Ky. Foundation Board Holds Reorganization Mtg.**

On October 18 the Board of Directors of the Kentucky Foundation for Medical Care held their first meeting of the organizational year.

The Board elected the following officers to serve for 1973-74:

President:	David A. Hull, M. D., Lexington
Vice President:	W. Neville Caudill, M.D., Louisville
Secretary:	Robert G. Cox, Louisville
Treasurer:	Paul J. Parks, M. D., Bowling Green

An Executive Committee of the Board was also elected consisting of the President; Vice President; Treasurer; Lee C. Hess, M. D., Florence; and Edward N. Maxwell, M. D., Louisville.

In other actions, the Board appointed Committee members and chairmen for the year and discussed the possibility of creating a lay advisory council.

Because all county society and Trustee District peer review committees are now operationally responsible to the KFMC, the Board of Directors adopted as formal policy that the activities and findings of all KMA peer review committees would be supported by the Board to include legal testimony if necessary.

So that the KMA membership could have an opportunity to obtain information on the KFMC PSRO plan, the Board asks all county medical societies or individual members to contact their KMA Trustee. He has a copy of the PSRO plan available for reproduction.

### **Annual Seminar To Be Held December 20 at Norton's**

The Sixteenth Annual Postgraduate Medical Seminar, sponsored by Norton Infirmary and the American Academy of Family Physicians, will be held Thursday, December 20. The program, which will last from 8:45 a.m. until 4:15 p.m., will be held in the new Norton-Children's Hospitals in Louisville.

The seminar will focus on "Current Approaches in Cardio-Respiratory Disease," and will feature Edward A. Gaensler, M.D. of Boston as guest lecturer. Members of the Norton Hospital staff and faculty members from the University of Louisville School of Medicine will also participate in discussions on lung disease, myocardial revascularization, respiratory failure, and echo cardiography.

The program is acceptable for five prescribed credit hours by the Kentucky Chapter, American Academy of Family Physicians.

### **New Multi-County Society Formed**

A charter was recently presented to the Shelby-Henry-Oldham County Medical Society which combined membership to form a new multi-county society. Edward G. Houchin, M.D., LaGrange, accepted the charter on behalf of the new society.

The multi-county society, whose charter was approved by the KMA Board of Trustees at their meeting on September 19, 1973, was authorized by a 1968 Bylaws change which gave county societies the right to join together into a multi-county society.

### **Hospitals Prepare for Move**

Norton Memorial Infirmary and Children's Hospital in Louisville will move into the new Norton-Children's Hospitals complex during the latter part of this month. Patient and equipment transfer will take place on the weekends of December 15-16 and December 29-30. Continuous service will be provided by both hospitals throughout this period.

### **What's Happening in Kentucky—**

The Kentucky Drug Formulary Council has submitted to the Legislative Research Commission its first set of regulations regarding specific medications for inclusion on the state's formulary list of generic drugs. Fourteen manufacturers of the antibiotic ampicillin are now on the formulary list.

\*\*\*\*\*

The Kentucky Department for Human Resources' dental health program began operation of a special fluoridation surveillance plan in August. By October, 44 communities in the state showed improvement in reaching levels of fluoridation closer to the optimal range than they were two months before, says James T. Corum, D.M.D., Fluoridation Consultant with Human Resources.

\*\*\*\*\*

Kentucky State Hospital, a psychiatric facility at Danville operated by the Kentucky Department for Human Resources, has been awarded a Certificate of Commendation by the American Psychiatric Association. The Hospital was recognized for its "significant progress in improving the quality of life for patients."



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**Special note**—Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

**Indication**—Ovulen and Demulen are indicated for oral contraception.

**Contraindications**—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

**Warnings**—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain<sup>1-3</sup> leading to this conclusion, and one<sup>4</sup> in the United States. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll<sup>3</sup> was about sevenfold, while Sartwell and associates<sup>4</sup> in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as non-users. The American study also indicated that the risk did not persist after discontinuation of administration and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

**Precautions**—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of

fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen or Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen or Demulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen or Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

**Adverse reactions observed in patients receiving oral contraceptives**—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T<sub>3</sub> uptake values; metyrapone test and pregnandiol determination.

**References:** 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. 13:267-279 (May) 1967. 2. Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193-199 (April 27) 1968. 3. Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. 2:651-657 (June 14) 1969. 4. Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidem. 90:365-380 (Nov.) 1969.

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# The Arch Dixon Memorial Meeting of The Kentucky Medical Association

Ramada Inn, Bluegrass Convention Center, Louisville, Kentucky, September 18-20, 1973

Digest\* of Proceedings of the Regular Sessions of the

## HOUSE OF DELEGATES

Richard F. Greathouse, M.D., Louisville  
Speaker of the House, Presiding

### First Session

Speaker Greathouse called the 123rd Meeting of the KMA House of Delegates to order at 9:10 a.m. and asked Paul J. Parks, M.D., Bowling Green, to give the invocation. He then called on Glenn U. Dorroh, M.D., Lexington, Chairman of the Credentials Committee, to give the report of the Credentials Committee. Doctor Dorroh reported that a quorum was present. A motion was made, seconded, and passed that the minutes of the 1972 session of the House of Delegates be approved as published in the December, 1972, *Journal* of the Kentucky Medical Association.

S. R. Scheen, M.D., Louisville, Secretary, gave the announcements. He announced that effective June 1, 1973, every member of the House, officers, trustees and committee members of KMA were covered by a \$50,000 accident insurance policy which covers you anytime you leave your residence to perform official duties for the Association. He called attention to the fact that the scientific sessions would begin at 8:50 a.m., Tuesday in the Convention Center; and emphasized that the highlight of the Annual Meeting, the President's Luncheon, would be in the Convention Center on Wednesday at 11:50 a.m. Doctor Scheen reminded the delegates that the Nominating Committee for general offices would meet at the close of this first session of the House and that the Reference Committees would convene at 2:00 p.m., Monday in various rooms of the

Convention Center. He also urged the delegates to visit the technical and scientific exhibits.

Doctor Scheen read the list of physicians who had died since the 1972 meeting of the House of Delegates, following which the members of the House stood for a moment of silent tribute. The names of these physicians, their locations and dates of death are as follows:

Archer, George P.	Prestonsburg	July 12, 1973
Bach, Bert C.	Whitesburg	March 3, 1973
Baker, John Coldiron	Berea	June 25, 1973
Ballard, Orville Lee	Louisville	Dec. 29, 1972
Boland, Lawrence Francis	Georgetown	January, 1973
Bowen, Steve Hansford	Harlan	Oct. 15, 1972
Bryan, James Woodall	Louisville	Aug. 23, 1972
Congleton, Virginia Lee	Frankfort	March, 1973
Cost, Guinn Shaw	Hopkinsville	March 3, 1973
Cox, William Moss	Corbin	August, 1973
Dyer, Garland Lambuth	Louisville	Feb. 27, 1973
Farmer, L. Irvin	Somerset	
Frank, Edward C.	Louisville	Aug. 23, 1972
Furnish, J. F.	Taylorsville	Dec. 25, 1972
Glenn, George A.	Lexington	April 5, 1973
Hacker, Elmer B.	Louisville	July 20, 1973
Harting, Charles W.	Kevil	Nov. 3, 1972
Hollis, Ben Harvey	Louisville	Nov. 10, 1972
Hume, Walter Irvin, Sr.	Louisville	Feb. 11, 1973
Jelsma, Franklin	Louisville	Aug. 19, 1972
Johnson, John Evan	Nortonville	Oct. 18, 1973
Johnson, Sydney Evans	St. Petersburg Fla.	Sept. 9, 1972
Lamm, Clifton D.	Bloomfield	Aug. 1, 1973
Martin, Presley Frank	Louisville	Jan. 11, 1973
Miller, David G., Jr.	Morgantown	July 14, 1973
Miller, Oliver P.	Columbia	May 31, 1973
Moore, Charles H.	Huffman, Texas	Feb. 7, 1973
Moore, Escum L.	Lexington	June 29, 1973
Mudd, E. D.	New Haven	Mar. 12, 1973
Neely, Paul Claude	Louisville	Feb. 3, 1973
Pennington, Clarke P.	Sarasota, Fla.	June 7, 1973
Savage, W. Mountjoy	Murray	May 23, 1973
Sargent, Ronald Lee	Lexington	May 22, 1973
Shouse, Samuel S.	Lexington	June 21, 1973
Simms, Harold B.	Springfield	April 14, 1973
Simpson, John P.	Stearns	February, 1973
Stabile, Vincent	Louisville	Sept. 13, 1972
Stacey, Adam, Jr.	Pineville	April 23, 1973
Terrell, Harris W.	Corbin	Dec. 13, 1972
Weakley, Adriel Clark	Shelbyville	June 14, 1973
Willey, Francis Droit	Versailles	Dec. 12, 1972

Doctor Greathouse announced the Reference Committee appointments as follows:

### Reference Committee No. 1

John E. Trevey, M.D., Lexington, Chairman  
L. F. Beasley, M.D., Franklin  
Glenn W. Bryant, M.D., Louisville  
C. David Eversole, M.D., Covington  
A. B. Richards, M.D., Louisa

\*Editorial Note: A tape recording was made of the two sessions of the House of Delegates, and any member who desires to examine the transcript of these proceedings may visit the Headquarters Office and listen to the recording.

### **Reference Committee No. 2**

Earl P. Oliver, M.D., Scottsville, Chairman  
Richard F. Hench, M.D., Lexington  
Nelson B. Rue, M.D., Bowling Green  
Paul J. Sides, M.D., Lancaster  
Lloyd G. Yopp, M.D., Louisville

### **Reference Committee No. 3**

Robert G. Overstreet, M.D., Louisville, Chairman  
Marilyn Sanders, M.D., Owensboro  
Raymond D. Wells, M.D., Inez  
James G. Wilhite, M.D., Lexington  
William R. Yates, M.D., Hebron

### **Reference Committee No. 4**

John M. Baird, M.D., Danville, Chairman  
McHenry S. Brewer, M.D., Louisville  
Larry B. Craycraft, M.D., Ashland  
Richard B. McElvein, M.D., Lexington  
W. N. Richardson, M.D., Cadiz

### **Reference Committee No. 5**

W. Fielding Rubel, M.D., Louisville, Chairman  
Thomson R. Bryant, Jr., M.D., Lexington  
W. H. Keller, M.D., Frankfort  
Paul F. Maddox, M.D., Campton  
N. H. Talley, Jr., M.D., Princeton

### **Reference Committee No. 6**

James L. Ferrell, M.D., Paris, Chairman  
Terrell D. Mays, M.D., Elizabethtown  
Wally O. Montgomery, M.D., Paducah  
James R. Barnes, M.D., Louisville  
Robert E. Smith, M.D., Covington

Doctor Greathouse announced that the tellers for both sessions would be W. E. Becknell, M.D., Manchester, Chairman; K. P. Haywood, M.D., Madisonville; and Charles G. Noss, M.D., Stanton.

The reports of the officers and committees were presented by the Speaker and referred to a reference committee as follows: (Only the reports of the officers were read.)

Report of the President—Reference Committee No. 1

Report of the President, Woman's Auxiliary to KMA—Reference Committee No. 1

Report of the President-Elect—Reference Committee No. 1

Report of the Speaker of the House—Reference Committee No. 1

Report of the Chairman, Board of Trustees—Reference Committee No. 1 with the following exceptions. All matters relating to Professional Standards Review Organizations were referred to Reference Committee No. 4, and the Report of the Ad Hoc Committee to Study Abortion Guidelines and the

Addendum to the Report of the Chairman on the full report of the Ad Hoc Committee to Study Abortion Guidelines were referred to Reference Committee No. 6.

Report of the Secretary—Reference Committee No. 1

Report of the Editor—Reference Committee No. 1

Report of the Treasurer—Reference Committee No. 1

Report of the Delegates to AMA—Reference Committee No. 1

Report of the Executive Director—Reference Committee No. 1

At this time, Doctor Greathouse announced that the president of each of the Student AMA Chapters in Kentucky was present to present an oral report to the House. Mr. Phil Aaron, President of the University of Louisville Student AMA Chapter, and Mr. Elliott Ray, President of the University of Kentucky Student AMA Chapter, gave their reports.

Doctor Greathouse introduced Max Parrott, M.D., of Portland, Oregon, a member and past chairman of the AMA Board of Trustees, who was attending our Annual Meeting. Doctor Parrott was then called to the podium for some brief remarks.

The Kentucky State Association of Medical Assistants served coffee and sweet rolls to the members of the House at 10:50 a.m. in the lobby of Ramada Inn.

The Speaker then continued with the referral of reports to the reference committees.

Report of the Judicial Council—Reference Committee No. 6

Report of the Kentucky Foundation for Medical Care, Inc.—Reference Committee No. 4 with the exception of the portions dealing with the Report of the Continuing Medical Education Committee which was referred to Reference Committee No. 2.

Report of the Rural Kentucky Medical Scholarship Fund—Reference Committee No. 6

Report of the Board of Directors, Kentucky Physicians Mutual, Inc.—Reference Committee No. 4

Report of the Scientific Program Committee—Reference Committee No. 2

Report of the Scientific Exhibits Committee—Reference Committee No. 2

Report of the Hospital Committee—Reference Committee No. 2

Report of the Emergency Medical Care Committee—Reference Committee No. 2 with the exception of the paragraph relating to changes in the Medical Practice Act which was referred to Reference Committee No. 3.

Report of the Advisory Committee to Blue Cross-Blue Shield—Reference Committee No. 4 with the exception of the paragraph relating to Emergency



Rooms which was referred to Reference Committee No. 2.

Report of the Committee on Business Management and Services—Reference Committee No. 5

Report of the Committee on Occupational Health, Physical Medicine and Rehabilitation—Reference Committee No. 3

Report of the Maternal Mortality Study Committee—Reference Committee No. 3

Report of the Advisory Committee to Selective Services—Reference Committee No. 5

Report of the Committee to Study the Constitution and Bylaws—Reference Committee No. 6

Report of the Interim Meeting Program Committee—Reference Committee No. 6

Report of the McDowell House Board of Managers—Reference Committee No. 6

Report of the Memorials Commission—Reference Committee No. 6

Report of the Committee on Legislative Activities—Reference Committee No. 3

Report of the Committee on Orientation—Reference Committee No. 6

Report of the Committee on Community and Rural Health—Reference Committee No. 4

Report of the Committee on Environmental Quality—Reference Committee No. 3

Report of the Liaison on Cults to the AMA—Reference Committee No. 3

Report of the Committee on Health Care of the Poor—Reference Committee No. 4

Report of the Committee on School Health, Physical Education and Medical Aspects of Sports—Reference Committee No. 4

Report of the Advisory Committee to Woman's Auxiliary—Reference Committee No. 1

Report of the Committee on Public Relations—Reference Committee No. 4

Report of the Coordinating Commission on Governmental Medical Services—Reference Committee No. 5

Report of the Technical Advisory Committee on Physician Services (Title XIX)—Reference Committee No. 5

Report of the Advisory Committee on Title XVIII (Social Security Act)—Reference Committee No. 5

Report of the Committee on Appalachian and OEO Programs—Reference Committee No. 5

Report of the Continuing Medical Education Committee—Reference Committee No. 2

Report of the Interspecialty Council—Reference Committee No. 3

Report of the Committee on Medicine and Religion—Reference Committee No. 2

Report of the Committee on Mental Health—Mental Retardation Centers—Reference Committee No. 5

### New Business

New business was presented to the House by the Speaker and referred to the reference committees indicated:

(A) Resolution from Ohio County Medical Society concerning Third Party Payment Plans (Reference to Resolution H of 1971 and 1972)—Reference Committee No. 1.

(B) Resolution from Bullitt County Medical Society concerning Physician Distribution—Reference Committee No. 1.

(C) Resolution from Campbell-Kenton County Medical Society concerning Abortion Policy—Reference Committee No. 6.

(D) Resolution from Campbell-Kenton County Medical Society concerning AMA Rubella Policy—Reference Committee No. 6.

(E) Resolution from Jefferson County Medical Society concerning Residents and Interns Proportionate Representation in the KMA House of Delegates—Reference Committee No. 6.

(F) Resolution from the KMA Board of Trustees concerning Amendments to Bylaws—Reference Committee No. 6.

(G) Resolution from McCracken County Medical Society concerning PSRO—Reference Committee No. 4.

(H) Resolution from KMA Board of Trustees concerning Position Statement on Abortion—Reference Committee No. 6.

(I) Resolution from Campbell-Kenton County Medical Society concerning PSRO—Reference Committee No. 4.

(J) Resolution from Fayette County Medical Society concerning Spring Meeting of the House of Delegates—Reference Committee No. 1.

(K) Resolution from Fayette County Medical Society concerning Section B Continuing Education Requirements for Kentucky Physicians (KMA-KFMC Medical Education Committee)—Reference Committee No. 2.

(L) Resolution from Fayette County Medical Society concerning PSRO—Reference Committee No. 4.

(M) Resolution from Fayette County Medical Society concerning Realignment of KMA Organization Structure with Goals and Objectives—Reference Committee No. 1.

(N) Resolution from KMA Board of Trustees concerning PSRO—Reference Committee No. 4.

(O) Resolution from the KMA Board of Trustees concerning Special Recognition of Mr. Wade Mountz.

A motion was made, seconded, and carried to adopt this resolution which read as follows:

WHEREAS, Wade Mountz, President of Norton-Children's Hospitals, Louisville, Kentucky, has diligently pursued his chosen field of endeavor with zeal and high purpose, and

WHEREAS, in addition to his prescribed duties, he has been a leader in helping to provide better health care for all Kentuckians, and

WHEREAS, he is recognized as having been a catalyst in cementing the excellent relationship among Kentucky's allied medical organizations, and

WHEREAS, we know he will utilize this same persuasive force to accomplish this desirable goal at the national level, and

WHEREAS, he has achieved recognition from his peers throughout the country, and

WHEREAS, he has been chosen as Chairman-Elect Designate of the American Hospital Association Board of Trustees, and

WHEREAS, election to this position is the highest tribute that can be paid to any member of AHA, now therefore be it

RESOLVED by the House of Delegates of the Kentucky Medical Association that we congratulate and laud Wade Mountz for his diligence and perseverance in working in concert with all health-related organizations throughout Kentucky in a manner which reflects much credit upon his professional association and be it further

RESOLVED, that this action become a part of the official proceedings of the first meeting of the KMA House of Delegates during this 1973 Annual Meeting so that all who may ever look upon the records of this Association will know of our desire to so honor Wade Mountz for his continuing contributions to his profession, this Commonwealth and, in fact, the entire United States.

(P) Resolution from Perry County Medical Society concerning Use of Medical Assistants—Reference Committee No. 4.

(Q) Resolution from W. Neville Caudill, M.D., concerning Legal Trust Fund—Reference Committee No. 1.

Due to the fact that Resolutions E through Q were not received prior to opening of the Annual Session, a motion was made and seconded to accept these resolutions and refer them to the appropriate reference committees. Motion carried.

Vice Speaker Cooper announced the meeting places for the Nominating Committees for general officers and the trustee districts electing trustees. Doctor Cooper stated that the Nominating Committee would report at the close of the first scientific session on Tuesday morning as well as at the second meeting of the House on Wednesday. Doctor Cooper named the physicians on the Nominating Committee as follows: Glenn W. Bryant, M.D., Louisville, Chairman; William E. Becknell, M.D., Manchester; William J. Sandman, Jr., M.D., Louisville; John E. Trevey, M.D., Lexington; and James O. Willoughby, M.D., Bowling Green.

The meeting was adjourned at 11:45 a.m.

## Second Session

Speaker Greathouse called the second session of the House of Delegates to order at 7:20 p.m. on September 19, 1973. The invocation was given by Paul J. Parks, M.D., of

Bowling Green. Doctor Dorroh reported that a quorum was present.

Robert N. McLeod, Jr., M.D., Somerset, Chairman of the Board of Trustees, was then recognized to present the final report of the Board. He read the following resolution which was passed by the Board at its September 19 meeting and moved its adoption. The motion was seconded and carried.

WHEREAS, the 1973 KMA Annual Meeting has made a substantial contribution in the field of continuing medical education and has been well received, and

WHEREAS, many individuals, organizations, and agencies including guests, state essayists, scientific and technical exhibitors, newspapers, radio and television stations, hotels, and the Convention Center, have contributed to its success, therefore be it

RESOLVED, that this House of Delegates go on record as expressing its deepest appreciation to all individuals and organizations who have had a part in the development and implementation of the 1973 Annual Meeting.

Doctor McLeod then read another resolution that was adopted by the Board of Trustees at its meeting on September 19 and moved its adoption. The motion was seconded and carried.

WHEREAS, the Kentucky Foundation for Medical Care, as established by the KMA House of Delegates in 1971, has made significant organizational advancement during this short period of time, and

WHEREAS, at the request of the KMA Board of Trustees, the Kentucky Foundation for Medical Care assumed the responsibility for Peer Review, and

WHEREAS, the Board of Trustees further requested the Kentucky Foundation for Medical Care to assume the responsibility of researching the PSRO Law and to make recommendations to the KMA Board of Trustees relative to PSRO, and

WHEREAS, at the direction and request of the KMA Board of Trustees, the Kentucky Foundation for Medical Care developed a plan of implementation which we feel is best for the private practicing physician and our patients, and

WHEREAS, there is unanimous support for the Kentucky Foundation for Medical Care plan for PSRO among allied groups including, but not limited to, the Kentucky Dental Association, the Certificate of Need Board, the State Comprehensive Health Planning Council, and the Kentucky Hospital Association, and

WHEREAS, Doctor David Hull has served admirably this past year as President of the Kentucky Foundation for Medical Care Board of Directors and has provided excellent leadership, devoted a



vast amount of time, and has caused to exist an attitude of cooperativeness among our medical allies on a difficult, unpopular, and complex law, now therefore be it

RESOLVED that the KMA House of Delegates commends Doctor David Hull for his leadership, his dedication to our profession, and the outstanding manner in which he has executed the assignment given him by the Board of Trustees on PSRO, and be it further

RESOLVED that a copy of this Resolution be presented to him as a token of this House's appreciation.

Doctor Scheen was then called to the podium for announcements and recognition of guests from the surrounding state medical associations who had attended KMA's Annual Session. These were Carl E. Stark, M.D., President, Medical Society of Virginia; A. Thomas McCoy, M.D., President, West Virginia State Medical Association; James Henry, M.D., President-Elect, Ohio State Medical Association; Joseph E. Dukes, M.D., President-Elect, Indiana State Medical Association; and E. A. Stricker, M.D., President, Missouri State Medical Association.

The Speaker then stated that the reports of the reference committees would now be read.

## REFERENCE COMMITTEE NO. 1\*

*John E. Trevey, M.D., Lexington, Chairman*

Reference Committee No. 1 considered the following reports:

1. Report of the President
2. Report of the President, Woman's Auxiliary to KMA
3. Report of the President-Elect
4. Report of the Speaker of the House
5. Report of the Chairman, Board of Trustees

All matters relating to Professional Standards Review Organizations are referred to Reference Committee No. 4. This includes Paragraph 4 on Page 8 and the first full paragraph on Page 9.

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*\*In order to make the Digest of Proceedings of the second meeting of the House of Delegates more understandable and because it will occupy less space in The Journal, the KMA Board of Trustees passed the following motion several years ago: "that if no dissenting action on the committee's recommendations is made either by the committee or the KMA Board of Trustees, only the reference committee action on the report be printed in The Journal."*

The Report of the Ad Hoc Committee to Study Abortion Guidelines, Paragraphs 2 and 3 on Page 12, and the Addendum to the Report of the Chairman on the full report of the Ad Hoc Committee to Study Abortion Guidelines, are referred to Reference Committee No. 6.

6. Report of the Secretary
7. Report of the Editor
8. Report of the Treasurer
9. Report of the Delegates to AMA
10. Report of the Executive Director
35. Report of the Advisory Committee to the Woman's Auxiliary
- Resolution B—Physician Distribution (Bullitt County Medical Society)
- Resolution J—Spring Meeting of House of Delegates (Fayette County Medical Society)
- Resolution M—Realignment of KMA Organizational Structure with Goals and Objectives (Fayette County Medical Society)
- Resolution Q—Legal Trust Fund (W. Neville Caudill, M.D.)

## Report of the President

As I leave this year of Presidency, I would like to place before you some thoughts and recommendations about the future of KMA and organized medicine which has been such an integral part of my life these past five years.

Having spent five years on your Executive Committee, two years as Chairman of your Board of Trustees, one year as President-Elect, and finally this most rewarding year as your President, I feel I have received an insight into our problems and would like to offer some suggestions for our future gleaned from this experience.

First, let me say that it has been an extremely pleasurable experience. I have met and learned to know some of the finest people in all of medicine all over this nation. I have found that the leadership of KMA, as well as the leadership of other states, and the AMA are truly dedicated to the preservation of the private practice of medicine and our "way of life." There are those who have serious doubts about this; but in all my travels, which have been considerable over these past years, I can assure you of the validity of this statement.

There is no doubt in my mind that the untoward changes occurring are really not of our own doing but have been pressed upon us for the most part. Ours has been the horrendous responsibility to try to mold and guide these changes so that we can continue to deliver the best medicine to our greatest responsibility—our patients. As protectors of our patients, we have a public trust to continue on in this endeavor lest no man, institution, government body or law usurp this responsibility or we be marked in history as perpetrators of travesty upon our charges—our patients.

In order to do this, I make these recommendations to you for your consideration.

1. We have a fine organization and one of the best working staffs of any state medical organization in the nation. However, in recent years, I feel we have been grossly unfair by laying more and more upon these shoulders. The committee structure has ever increased, as has the work load, without added help in proportion. It has reached a point where efficiency can't be expected to remain at its current level. I, therefore, recommend to you that an ad hoc committee of this organization be formed to study our objective and structure new committees using ad hoc committees wherever possible, deleting some of the old nonessential committees, and realigning this work load, thereby breathing new life into this fine machine before it flounders from overwork.

2. All of us have felt the pinch of fixed income and rising costs. It has only been through diligent handling of our financial affairs that we have not seriously depleted our standing reserves, which we should definitely maintain at safe levels. There are numerous approaches that come to my mind that I feel should be considered in maintaining the proper services to the profession.

Having spent a number of years in seeing from the inside what KMA does for us and noting the budget requirements and management, with the endorsement of this House of Delegates, I would recommend that as your Immediate Past President I would do the following:

A. Meet with the Budget Committee with a charge to take both an immediate and long term look at KMA financing.

B. Consider with the Budget Committee the possibility of setting a dues base for KMA members which would be flexible to an adjusting, plus or minus, sliding scale by being tied to some recognized cost factor such as the cost of living index, etc. This should eliminate any dues increases other than routine adjustments except when the House of Delegates requests new, costly programs requiring additional funding. (We should at least maintain our purchasing income at a constant level. It seems we should not need to vote to change our Bylaws for an additional \$4 to \$5 every year or so to maintain this level.)

C. Thoroughly investigate the concept of generating income to supplement or replace dues increases.

D. Request the Chairman of the Board to name four Trustees and the Speaker of the House of Delegates to name four members of the House of Delegates, which would form an ad hoc committee to accept any recommendations from the Budget Committee when such specific recommendations are available. The above-named ad hoc committee would then receive these recommendations for study and would submit a report to this House of Delegates for whatever action may be indicated.

3. Earlier this year I presented to your Board of Trustees an outline of the duties of the Trustee as I saw them. Correlating these duties with a map of the

Trustee Districts of the State of Kentucky, I find that the makeup of Trustee Districts in some parts of the state make the application of duties outlined of some of the Trustees next to impossible.

I would recommend that another ad hoc committee composed of three Trustees, to be named by the Chairman of the Board, and five members of the House of Delegates, to be named by the Speaker and Vice-Speaker, be appointed to study this external structure of KMA with the view of improving the relationship and communication between component societies and the various Trustees so they can more truly represent their constituents.

And now in my reflections over the past few years, I wish to expound on some generalities rather than specific proposals and exercise the privilege of my office to give you—the House of Delegates, the Board of Trustees, and our elected officers—a composite of my feelings on some of the basic issues confronting you now and in the near future.

1. Political Action—It has been encouraging to me to see some renewed interest by our membership in the political process through increased membership in KEMPAC. It is still far less than it should be. Our participation in KEMPAC and AMPAC still leaves much to be desired.

Our future, as is our present, is tied to the legislative process. It is somewhat sad that we did not have two or threefold as much participation in these organizations and two or threefold more input in the administration. If we all could only realize the importance of this activity and how it would mold our future, I cannot visualize men of vision and intelligence turning their backs. We must be more politically active to survive.

2. Professional Standards Review Organizations—PSRO is now the law of the land. I think most of us (I surely do) feel this is another bureaucratic travesty on the public and an intrusion into medical care. However, as an American citizen, I "bow to the law of the land" and make these observations.

Government has passed a law which it authorizes us to administer. Possibly, under our guidance and with the proper attitude, we will use this law to our own advantage and to our patient's advantage by improving medical care by pinpointing areas of educational needs both for the physician and for our patients. By doing this, some good can come of this activity. I say possibly because I still have grave doubts it will work even with our diligent attempt. I do know that government clearly intends to attempt to make it work with or without us.

I also am convinced that without us there is no doubt PSRO will prove to be the destructing instrument of one of the finest health delivery systems in the world—Ours. I feel that as long as the government allows us to administer our own standards and does not impose the standards of bureaucratic Washington or Frankfort upon us, we should attempt to make it work. If this prerogative ever be taken from us, that will be the time to show our real strength of cohesiveness and purpose of action, namely, the best medicine for the most people at reasonable cost



without any interference between ourselves, the physician, and our patients.

Ladies and gentlemen, I wish to thank you for the privilege of serving as your President this past year, and I hope and pray that our future will be as bright and rewarding as our past has been. I have included a schedule of meetings I have attended to represent you this past year for your information. It has been a real pleasure for me.

Lee C. Hess, M.D., President

#### PRESIDENT'S MEETING SCHEDULE

##### 1972

- Sept. 28-30 KMA Officer-Staff Conference
- Oct. 3-5 Chamber of Commerce Tour
- 8-10 National Association of Blue Shield Plans Program Conference, Los Angeles
- 15-17 Indiana State Medical Association Annual Meeting
- 23 Ad Hoc Committee to Study Judicial Council
- 25 Board of Directors, Kentucky Foundation for Medical Care
- 26 Executive Committee Meeting
- Nov. 9 Kentucky Association of Nursing Students Convention
- 9 Scientific Program Committee Meeting
- 9 Interim Meeting Program Committee Meeting
- 16 Board of Directors, Kentucky Physicians Mutual
- 26-29 AMA Clinical Convention, Cincinnati, Ohio
- Dec. 7 KMA Board of Trustees
- 14 Specialty Group Presidents
- 14 Emergency Room Problem

##### 1973

- Jan. 16 Quick Action Committee and Doctor Hull with Governor
- 25 Long Range Planning Session
- Feb. 1-2 Conference on Medical Education
- 16 KMA-KFMC-KHA PSRO Session
- 16-18 AMA Leadership Conference
- 22 Blue Shield Long Range Planning Committee
- March 7 Quick Action Committee
- 7 Certificate of Need
- 8 Executive Committee
- 10-11 AMA-AMPAC Workshop
- 11-12 AAMSE PSRO Workshop
- 12-13 KMA Washington Dinner
- 20 KMA-KPhA (Generic Drugs)
- April 6-7 District 8 Meeting, Carter Caves
- 12 District 4 Meeting, Lebanon
- 17 Program Speaker, KHA Annual Convention
- 18 AMA Action '73 Leadership Conference
- 18 Meeting with Officers of KNA
- 18 Meeting with Officers of KBA
- 19 KMA Leadership Conference
- 28-29 Hosted Surrounding State Presidents Meeting
- May 1 District 13 Meeting, Ashland
- 2 District 14 Meeting, Pikeville
- 12-13 Blue Shield Business Meeting, Ft. Lauderdale, Fla.
- 15 KMA Executive Committee
- 16 KMA—Foundation Joint Board Meeting

- June 7 Special Meeting with Mr. True, Head of new Department of Human Resources
- 13 Legal Counsel Search Committee
- 14 Meeting with KNA Officers
- 23-28 AMA Convention, New York
- July 26 Blue Shield Board of Directors
- Aug. 8 Foundation Board of Directors
- 29 Executive Committee
- 30 KMA Board of Trustees
- 30 Meeting with HEW Officials (PSRO)

#### Recommendations, Reference Committee No. 1

The Report of the President was reviewed at length. The President is commended for his excellent report and great service to the Kentucky Medical Association during the past year. His thoughtful recommendations have been reviewed, and they are felt to be very desirable for the betterment of KMA. The recommendations for an ad hoc committee to study the reorganization of KMA committee structure, expenditure study, and redistricting study are felt desirable. We commend the President for a job well done.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

### Report of the President of the Woman's Auxiliary

A challenge was issued to each member of the Auxiliary to become more knowledgeable about the Auxiliary; to involve herself in any one of the many and varied programs offered through her local and/or state Auxiliary.

Since membership is one of the basic necessities before involvement, we look with pride towards our increase from last year of 1281 to 1389 this year, a vital sign of interest in the Auxiliary. We also have a newly organized Auxiliary, Rowan County, making 25 organized counties. We received two awards at the Woman's Auxiliary to the American Medical Association Convention in New York; one for increase in membership and one for having a new county auxiliary formed.

Nutrition was a new program added this year and it was gratifying to see some of the auxiliaries immediately add this to their programs. While several had this as a project, many counties had a program during their year designed to educate their members as to what's new and applicable in nutrition. Jefferson County taught cooking classes to a group of senior citizens with an emphasis on low cost, nutrition and cooking for one or two. Daviess County helped with a similar program. Fayette County began the Special Diets Program in the Meals on Wheels Program. McCracken County's Nutrition Chairman prepared a program entitled, "Food Facts and Fallacies," and offered it to various groups as well as her Auxiliary.

Since the Kentucky legislature didn't convene this year, our efforts in this direction were not as personal as in the past. County legislative chairmen were encouraged to actively participate in the LEGS Line, in-

troduced by the National Legislative Chairman. Several of us attended the Legislative Day in Washington where we met with our Senators and Representatives from Kentucky. And several of us were pleased to be invited to participate in the course, ACTION NHI '73 here in Kentucky.

Our KEMPAC Chairman has encouraged membership in KEMPAC with a concentrated effort directed toward the Board members. Our Auxiliary received a second place award for having the greatest number of Auxiliaries as KEMPAC members at the AMPAC workshop in Washington.

The two medical schools in Kentucky, U of L and U of K, were presented checks at the Interim Meeting of KMA earned by AMA-ERF for \$11,608.51. The Auxiliary earned \$6,707.72 of that. Our methods of raising this money continue to be Christmas cards, watches, stationery, donations, etc. This year, as of July 1, we have earned \$9,905.40. Four Auxiliaries have contributed \$10 per capita. The International Book Project which is a suggested project of International Health Activities Committee, was supported by the Fayette County Auxiliary and other counties expressed interest in it.

McDowell House continues to be a visiting place of many auxiliaries and receives contributions and physical help from many of the counties. The Was-sail Party at the House on Christmas was a memorable occasion. It was beautifully decorated and the aroma emitting was so enticing and pleasing that it surely would have been nostalgic to Doctor McDowell.

From antique fairs to a day at the track, many methods have been used to raise money to promote health careers and health career loans and scholarships. Three fairs were held in the state and many programs were given at schools. More than \$35,000 is being used to educate some 52 students in health related careers in Kentucky.

I attended the National Convention in New York of the Woman's Auxiliary to the American Medical Association, the Conference in Chicago, Southern Workshop in Atlanta, Quality of Life Conference in Chicago, AMPAC Workshop and Kentucky Legislative Day in Washington and the Convention of the Woman's Auxiliary to the Southern Medical Association in New Orleans.

I planned and conducted the Fall Conference and Board Meeting of the WA-KMA in Louisville and the Spring Board Meeting at Lake Barkley. I've visited county auxiliaries and spoke at KMA District Trustee Meetings.

This is a unique organization which can serve all physicians' wives throughout the state with its many and varied programs. It creates an awareness and concern of health needs in respective communities and presents a challenge to those interested in the basic concept of health.

Rose Gardner, Co-ordinator, has been a constant source of help and encouragement. Our office in the KMA Building has created a pleasant atmosphere in which to work and caused us to feel "part of it all."

To the Kentucky Medical Association, I extend grateful thanks and appreciation for their support, their interest and their financial contributions. We are proud of our Auxiliary and we hope you are pleased with our growth and our many endeavors of this year, 1972-73.

Mrs. George W. Schafer, President  
Woman's Auxiliary to the KMA

#### Recommendations, Reference Committee No. 1

The Report of the President, Woman's Auxiliary to KMA, was reviewed; and again this year, the committee was impressed by the energy and work of the Auxiliary. We wish to congratulate the President and express our gratitude for the Auxiliary's support and fine work.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

### Report of the President-Elect

It has been a pleasure and privilege to serve this past year as President-Elect of KMA. It has been both rewarding and informative and, hopefully, has better prepared me to serve the forthcoming Associational year as your President. Out-of-state meetings have particularly been an educational opportunity and an enjoyable experience. The cooperation which I have received from KMA officers, staff, and the general membership has been deeply appreciated and most helpful.

As we turn the corner and view the next Associational year, it would appear from many indications that we will be faced with many of our perennial tasks; but more importantly, it would appear that we will see more major changes and developments in the forthcoming year than have occurred in the last several years combined. Undoubtedly, there will be changes and developments which will touch deeply the convictions and feelings of many people. Needless to say, the final resolution of such major and important developments may not meet the total and specific desires of all people. However, we must concern ourselves with the best possible approach to all matters, being ever mindful of the quality of medical care, the wishes of the people, and the practice of free medicine as unencumbered as possible.

It is my strong desire to convey to the people of the Commonwealth the benefits and quality of the many and varied medical services available to them as well as the monumental efforts expended by the members of our profession toward the betterment of medical care for all people. It is further my desire to see all standing and ad hoc committees functional and productive with emphasis on the involvement of as many physicians as possible in our organizational activities. We must reach out to tap the energy and resourcefulness of our young physicians while utilizing the experience and wisdom of our older members for the benefit of our total profession and the welfare of all mankind.



I wish to assure each physician, KMA officers, staff members, members of the press, government officials, and all the people of Kentucky of my fullest cooperation and candid approach toward the discussion and resolution of any matter which may arise. Certainly, I look forward to working with each of you; and it is indeed a privilege to have this opportunity.

Fred C. Rainey, M.D., President-Elect

#### **Recommendations, Reference Committee No. 1**

The Report of the President-Elect was reviewed, and the committee wishes him a most successful tenure of office. We commend his stated goals.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

## **Report of the Speaker of House**

In lieu of a lengthy report which has been submitted in previous years, I wish to thank all of the members of the House of Delegates for their attendance at the 1973 meeting and say to you that we are all grateful for your hard work, diligence and perseverance in pursuing the matters that will come before this body. The only change from our previous years' meetings will be that Bennett L. Crowder, M.D., of Hopkinsville, Kentucky, will assume his official duties as Parliamentarian of the House of Delegates and will be available to the Speaker and members of the House on matters involving parliamentary procedure.

Once again, on behalf of the Speaker and Vice-Speaker, we appreciate your attendance and are looking forward to seeing you at the September meeting.

Richard F. Greathouse, M.D., Speaker

#### **Recommendations, Reference Committee No. 1**

The committee reviewed the Report of the Speaker of the House, and the committee commends the Speaker for his excellent work and long hours spent in working for KMA. We commend the election of Doctor Crowder as Parliamentarian.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

## **Report of the Chairman of Board of Trustees**

Nobody has ever written a job description for the office of Chairman of the Board of Trustees. This has been my fifth consecutive year on the Board, so I should have known what it entailed. After serving you during the past Associational year as your Chairman of the Board of Trustees, I would certainly say that there are many things that characterize this job. It is interesting, it's gratifying, it involves you in areas that you never knew existed, and it certainly brings you much closer to the significant issues and challenges facing medicine at the local, state, and national level. Above all, it is

hard work and it certainly contributes to what was already a poor pediatrician's cauliflower ear, i.e., you live on the telephone.

Involvement of KMA on your behalf increases daily until "the Mountain" we deal with has become so high that there is no way the entire membership can ever know what is being done for them by KMA as individuals, for the profession as a whole, and for the people of the Commonwealth.

Our organization is one in which we must take strong, unified stands by the democratic process and act for the profession based on our decision. Many times these decisions must be made with short notice, so it is imperative for us to try to stay abreast of all the changes that are going on from the local to the national level. Of course, all of us could never agree all the time on all the issues. To do so would be a sign of weakness. Can you imagine all the members being unanimous on two tremendous issues that have highlighted this year, namely, the abortion issue and PSRO. As individual thinkers, this could never happen and should not; but as an organization, we must make a decision that we feel is in the best interest of all concerned, physicians and patients. KMA must stand stronger today than ever before. We can do so only with the support, understanding, and representation of all the membership. To get this, each member of KMA must study the information he receives about these issues so that he can instruct his representatives and aid in making KMA's decision—one which represents the educated thinking of the majority of the members of KMA.

This year the members of the Board have given more and more time to representing our entire membership and to do the job that must be done. Decisions have come only after much discussion, deliberation and, often, soul searching. They are certainly to be commended for their superb representation.

The entire Board of Trustees was in session nine times this year—one of these being a joint meeting with the Blue Shield Board. Two were joint meetings with the Kentucky Foundation for Medical Care Board of Directors. The Executive Committee met four times, and the Quick Action Committee met so often that it seems we were in contact five out of seven days in order to conduct the day-to-day operations of KMA.

There is no way that I could possibly give you a true summary of all KMA's activities. I will attempt to give you a brief synopsis of the Board's actions and plans, and I will summarize the actions of the Board's ad hoc committees at the end of this report.

#### **First Meeting, September 21, 1972**

Acting as temporary chairman, KMA Secretary S. Randolph Scheen, M.D., introduced the new or re-elected members of the Board as follows:

James B. Holloway, M.D., as Vice-President  
Edward Maxwell, M.D., as 5th District Trustee  
Earl B. Rynerson, M.D., as 11th District Trustee  
Harold L. Bushey, M.D., as 15th District Trustee  
Thomas Heavern, M.D., AMA Alternate Delegate  
William W. Hall, M.D., AMA Alternate Delegate

Re-elected to their respective positions were:

Richard F. Greathouse, M.D.,  
as Speaker of the House  
Carl Cooper, Jr., M.D., as Vice-Speaker  
Paul J. Parks, M.D., as 6th District Trustee  
Carl J. Brueggemann, M.D.,  
as 8th District Trustee

A special recognition was given to Fred C. Rainey, M.D., in his new capacity as President-Elect.

The Executive Committee was formed with the election of Robert N. McLeod, M.D., as Chairman, and Ballard W. Cassady, M.D., as Vice-Chairman. Edward Maxwell, M.D., and Eugene Sloan, M.D., were named to represent the Board of Trustees on the Executive Committee, which was completed with the officers who automatically serve on the Executive Committee, i.e., President, President-Elect, Vice-President, and Secretary.

Next to be elected were those to serve on the Kentucky Foundation for Medical Care Board. Those named were Bruce Hamilton, M.D.; J. Wesley Johnson, M.D.; Paul J. Parks, M.D.; Edward N. Maxwell, M.D.; and David A. Hull, M.D. Physicians-at-large were Robert Blake, M.D.; C. C. Lowry, M.D.; Walter I. Hume, M.D.; Joseph Hamburg, M.D.; and W. Neville Caudill, M.D. Other KFMC Board members were noted to be automatic appointments due to their official position.

After selecting the Louisville Ramada Inn as the site for the 1973 Convention, the Board proceeded to their main item of business, that of appointing membership of all the committees to serve during the Associational year.

### *Second Meeting, December 7, 1972*

The second regular session of the KMA Board of Trustees was held on December 7, 1972, at the Headquarters Office. The President's Report and the Report of the Delegates to the AMA were accepted for information. In addition, several members of the executive staff presented brief reports so that members of the Board could be better informed regarding KMA's total range of activities.

Action on committee activities and recommendations included:

Orientation to be held in 1973 once more on a voluntary basis.

Executive Committee recommended appointment of an ad hoc committee to study a plan and bring to the Board recommendations concerning KMA Trustee and Comprehensive Health Planning districts being the same.

Accepted the report of the ad hoc committee to study the Judicial Council matters and the individual recommendations of that committee.

Set a date for the annual Washington Dinner, March 12-13, 1973, at the Washington Hilton Hotel.

Appointed William W. Hall, M.D., Owensboro, to meet with the Kentucky Nurses Association regarding changes in the Nurse Practice Act.

Approved recommendations for a Legislative Affairs Seminar to be held in conjunction with Smith Kline and French Laboratories in 1973.

Approved and finalized the program for the 1973 Interim Meeting.

Voted to approve expenditures of \$2,500 over the next three years by the Public Relations Committee to prepare a KMA booth to be used wherever we are asked to exhibit.

Voted to approve sponsorship of a WAVE television special on Christmas Eve on the life of Doctor Ephraim McDowell.

Approved construction of new offices for the Department of Medical Licensure in the basement of the Headquarters Building.

Appointed an ad hoc committee to investigate medico-legal guidelines.

In other action the Board heard from David A. Hull, M.D., President of the Kentucky Foundation for Medical Care, and voted to advance the Foundation \$1,000 providing legal counsel determines it can be legally accomplished.

In addition to Doctor Hull, the Board heard a report on PSRO's from W. Neville Caudill, M.D., Chairman of the Claims and Utilization Review Committee.

William P. McElwain, M.D., Commissioner of the Department of Health and President of the Medical Licensure Board, stated the Licensure Board had adopted an annual registration fee for Kentucky physicians of \$12.00.

The KMA Board also approved sending the Speaker and Vice-Speaker of the KMA House of Delegates to the Southeastern Conference of Speakers if money is available for such a project.

Dale Farabee, M.D., Commissioner of Mental Health and a member of the KMA Legislative Committee, spoke in regard to Resolution L which concerns admissions to state hospitals. He stated his feeling that the major problem is a misunderstanding of the law. He gave several examples of problems that have arisen as a result of misinterpretation.

The date of the next Board Meeting was set for March 28, 1973, at Lake Barkley Lodge immediately preceding the KMA Interim Meeting.

### *Third Meeting, March 28, 1973*

The third regular session of the KMA Board of Trustees was held on March 28, 1973, at Lake Barkley State Park in Cadiz. At the beginning of the meeting, the President's Report and the Headquarters Office Report were accepted for information.

Ballard W. Cassady, M.D., Chairman of the KMA Budget Committee, presented the proposed budget for the 1973-74 Fiscal Year. The budget had previously been approved by the Budget Committee. The budget was accepted by the Board and the Committee was commended for its efforts and preparation of the budget.

Committee action and recommendations to the Board were as follows:

Approved a School Health Committee request of \$500 for possible use to help defray costs of the Second Annual Seminar on the Medical Aspects of Sports.

Business Management and Services Committee reported on several proposed programs concerning



group travel policies, liability insurance and others. The committee also reported on a proposal to charter a flight to the AMA Clinical Convention in Anaheim, California, this fall. The Board approved proceeding with plans for such a flight.

Legislative Activities Committee reported briefly on the Washington Dinner and also the fact that the first KMA Legislative Seminar is scheduled for June 15-17, Barren River State Park.

Emergency Medical Care Committee reported on plans for the Second Annual Seminar for emergency room nurses.

Hospital Committee Chairman, Richard B. McElvein, M.D., discussed several problems which have arisen concerning hospital emergency rooms. The committee recommended several ways to meet these problems and also suggested that Metropolitan Life Insurance Company (Medicare Part B) sponsor regional seminars for physician staff members to assist them in the proper methods of billing for services under Medicare. All these recommendations were accepted by the Board, as was the request of the Public Relations Committee to discontinue Community Health Week as a KMA project.

David A. Hull, M.D., President of the Kentucky Foundation for Medical Care, presented a detailed report to the Board regarding PSRO's. He also received approval from the Board to request the State Comprehensive Health Planning Council to endorse the concept of a single PSRO for Kentucky.

Continuing medical education was considered at length and the Board requested that the Medical Education Committee continue their activities in developing continuing medical education programs.

J. Thomas Giannini, M.D., Senior AMA Delegate from Kentucky, reported on activities of the AMA delegation regarding membership. He further reported that the KMA had received recognition for increased membership in AMA in 1972.

The Chairman informed the Board concerning several state councils and boards to which KMA submits nominees to the Governor for appointment. A list of these nominees was distributed and approved by the Board.

The Board approved an Executive Committee recommendation that a KMA-KNA Joint Practice Committee be established and referred the possible appointment of an ad hoc committee to study primary physicians in Kentucky to the Quick Action Committee.

Lee C. Hess, M.D., President of KMA, reported on action regarding an Inter-Professional Code between KMA and the Kentucky Bar Association. The Board accepted the Code and finalized plans for publication and distribution.

The Ad Hoc Committee to Select a KMA Parliamentary recommended the appointment of Bennett L. Crowder, M.D., Hopkinsville, to this position. The Board approved this nomination. The Chairman reported that the State Department of Health had discussed with KMA the possibility of a special study of drug prescribing patterns of physicians in Kentucky. The Board voted to appoint a committee to work in conjunction with the State Department of Health

and bring back recommendations to the Board.

The Chairman reported that the Interim Meeting Program Committee is making a detailed study of all aspects of the meeting and will report back later concerning continuation of the Interim Meeting.

The Board voted unanimously that a resolution and special award be presented to Hoyt D. Gardner, M.D., Louisville, to recognize him for his service as Chairman of the AMPAC Board of Directors during the past two years.

It was announced that the next regularly scheduled meeting of the Board would be held in August, but a special meeting may be held in the interim period.

#### *Fourth Meeting, April 19, 1973*

The April 19 Board Session was actually a combined meeting with the Blue Shield Board and with representatives of the county medical societies. Billed as a Leadership Conference, the day-long program was most educational; and we were especially grateful to two of the speakers for traveling some distance to be with us. They were Mr. Ned Parrish of Chicago, President of the National Association of Blue Shield Plans, and Clinton McGill, M.D., of Portland, Oregon, a member of the AMA Speaker's Bureau and President-Elect of the Oregon Medical Association.

#### *Fifth Meeting, May 16, 1973*

The fifth session of the Kentucky Medical Association Board of Trustees was held on May 16, 1973, at the Headquarters Building in Louisville. The Board appointed an ad hoc committee to study the Supreme Court abortion decision as it relates to current KMA policy and unanimously reaffirmed support of the Medigredit legislation with new additions that have been made to the original Medigredit bill. Upon recommendation of the Executive Committee, the Louisville firm of Stites, McElwain and Fowler was selected to be KMA's legal counsel effective July 1.

It was announced that the next regularly scheduled meeting of the KMA Board of Trustees would be held in August.

#### *Sixth Meeting, August 9, 1973*

The prime purpose of the August meeting of the Board is to review the committee reports before they are submitted to the House of Delegates. Numerous committee chairmen were present to personally present their reports, and the trustees had been assigned specific reports for detailed studying and reporting to the full Board.

Detailed reports were also given by the President, Senior Delegate to the AMA, Corporate Secretary, Foundation President, and President of the Board of Medical Licensure.

A presentation was made to KMA Past President, John S. Harter, M.D., (a bound volume of Journals published during his year as president); and a resolution of sympathy was adopted and a plaque authorized for placement in the Prestonsburg General Hospital in memory of Past President George P. Archer, M.D.

The Board took action to:

Approve a policy statement concerning the duties of the KMA Parliamentarian.

Authorize three new committees.

Accept an Auxiliary report requesting KMA to provide secretarial help to the Auxiliary.

Place a moratorium on KMA Interim Meetings, but request the Interspecialty Council to consider a new meeting in its place.

Submit nominees to the Governor for the Board of Nursing Home Administrators.

Authorize co-sponsoring an institute with the Kentucky Hospital Association on Joint Commission on Accreditation of Hospitals matters.

Approve the dates of September 17-21 for the 1978 KMA Annual Meeting.

The status of new committees reported on included the Kentucky Medical Association—Kentucky Bar Association Committee, the Kentucky Medical Association—Kentucky Nurses Association Joint Practice Committee, a joint committee with the Kentucky Chamber of Commerce, and the Committee on Abortion Guidelines. The Abortion Guidelines Committee delayed action on any recommendations they might have until the Board session just prior to the Annual Meeting.

Action was taken on a Judicial Council request concerning the completion of statements for Medicare patients. The Board adopted an AMA policy statement which states: "The physician must report fully and adequately in his billing the nature of his services provided so that the patient may be properly reimbursed by the Medicare carriers." Nominations for Judicial Council membership are to be finalized at the next Board Meeting for presentation to the House of Delegates.

A full discussion was held on the Medical Education Committee report, and an informational report was received from the Claims and Utilization Review Committee. Action was also taken on the Emergency Medical Care Committee on subjects relating to (1) emergency medical technicians, (2) first aid training in high schools, and (3) local airport disaster drills.

Representation was authorized for an AMA PSRO conference in Cleveland, Ohio, September 6-7; and information was provided concerning an HEW hearing on PSRO for Kentucky to be held August 30 with the KMA and KFMC Boards invited along with allied groups, third party carriers, county medical societies, and others who may wish to attend.

Following a review of 29 committee reports, the Chairman announced that following the August 30 Board Meeting, the Board would hold three sessions during the Annual Meeting and the Executive Committee would meet at least once during that time.

#### *Executive Committee*

The members of the Executive Committee quickly learned they had a job and not a position. They accepted it enthusiastically, and have been at the grindstone all year. They represented you well at many local, state, and national meetings. In addition, there were many special assignments and much work

was demanded of them in preparing for their attendance at Executive Committee meetings.

The October session was long and difficult as we strived to implement the actions of the 1972 House of Delegates. Of special note here is the many, many hours searching for a method to implement Resolution H as passed by the House last year. The Executive Committee has asked that I explain what we have done to try and implement Resolution H. I will plan to do so at the Monday morning session of the House. In addition, I will be available to the reference committee to which this report is assigned and would also refer the reference committee members to the March 28 Board minutes where this subject is discussed in some detail. I would just point out at this time that the Executive Committee and the Board of Trustees felt that everything that could or should be done has been accomplished. The Board feels it has done all in its power in an attempt to implement Resolution H, and wanted this reported as such to members of the House.

The March meeting of the Executive Committee also covered numerous subjects, but in May a limited agenda was prepared for finalizing recommendations to be made to the Board. The August meeting is historically a long one in making nominations for our committee structure. The complete minutes of the Executive Committee and Board of Trustees will be made available to members of Reference Committee No. 1.

All of us on the Board are extremely grateful to the members of the ad hoc committees of the Board who have accomplished much for us this year. The following summarizes a portion of their activity.

#### *Building Committee*

The KMA staff has now completed a full year's occupancy in the addition to the KMA Headquarters Building, and we thought that the membership might be interested in this final report which is a follow-up to last year's report when we discussed the construction phase of the new wing.

The addition, which increased the overall size of the KMA Headquarters Office to approximately 17,000 square feet, now houses part of the executive and secretarial staff members, the KEMPAC office, the office of the Coordinator for the Woman's Auxiliary, and the Kentucky State Department of Medical Licensure as well as kitchen and conference areas. The Licensure Department is housed on the lower level of the building addition and has three offices, a reception area, and storage area. The Licensure Department rents the space at the Headquarters Office, but equipment used by them is the property of the State of Kentucky.

Staff reports that the addition is highly satisfactory and is quite a relief from the crowded conditions we reported to you two years ago. Additional meeting space was incorporated into the building addition and that room is in use constantly. Three simultaneous meetings at the Headquarters Office are not unusual and as many as nine meetings have been held in the Headquarters Office in one single day. The entire second floor is vacant at this time but is an excellent



area for meetings as witnessed by the fact that several large groups, including combined Board meetings, have been held on the second floor.

The Building Committee is pleased to report that there have been no special problems with the new addition and everyone that has taken the opportunity of visiting the new facility has been very pleased with it.

The Headquarters Office is located at 3532 Ephraim McDowell Drive (interchange of Watterson Expressway and Taylorsville Road) and is approximately a five minute drive from the Ramada Inn. Your Building Committee urges you to take the opportunity to visit the Headquarters Office anytime you are in the Louisville area.

#### *Committee to Study Medico-Legal Guidelines*

Our committee met separately and with representatives of the Kentucky Bar Association that culminated in the Boards of the two associations adopting a KMA-KBA Medico-Legal Code. Since this is the first such code adopted in Kentucky, copies of it were distributed to the entire membership via *The Journal of KMA*. After suggestions and recommendations have been received, it is anticipated that the Code will be modified as necessary.

#### *Other Committee Activities*

The Ad Hoc Legal Counsel Search Committee spent many hours in interviewing and preparing their recommendations for the Executive Committee and the Board. We also appreciate the good work of the Ad Hoc Committee to Select a KMA Parliamentarian, and I know you will find Doctor Ben Crowder of Hopkinsville knowledgeable and eager to assist you in your deliberations.

Other special ad hoc committees were utilized to study special matters such as Certificate of Need regulations and State proposals for Department of Human Resources, etc.

Although it is not an ad hoc committee, I also wanted you to know of the newly formed Kentucky Medical Association—Kentucky Nurses Association (KMA-KNA) Joint Practice Committee, serving as a sounding board for the two professions and to examine the nursing profession's expanding role. The committee has already held organizational meetings and is expected to present definitive recommendations next year.

In closing my report, I would like to express my sincere appreciation to each member of the Board and to all committee members, especially those who have served so diligently on ad hoc committees with problems that have been acute and difficult to solve. I would also like to let the some 20 employees of KMA know that there is no way that my job could have been done without their help. I sincerely hope that you, the membership, realize that we are fortunate in having some of the finest people to conduct our field and headquarter's services and represent us so well not only in the Commonwealth but in various and sundry meetings in other states. Without them we would be lost, especially the leadership of KMA. I sincerely wish that the entire mem-

bership would express their gratitude to these fine people.

Robert N. McLeod, Jr., M.D., Chairman

#### **Recommendations, Reference Committee No. 1**

The Report of the Chairman, Board of Trustees, was reviewed with the exception of paragraph four, page 8, and the first full paragraph on page 9, and also the Report of the Ad Hoc Committee to Study Abortion Guidelines, paragraphs two and three on page 12, and the Addendum to the Report of the Chairman on the full report of the Ad Hoc Committee to Study Abortion Guidelines. We commend the Chairman for a very outstanding year, and take cognizance of the many hours spent in working for KMA. The committee noted particularly the efforts that the Executive Committee took in trying to implement Resolution H of 1971 and 1972, and commends it for these untiring efforts.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

## **Report of the Secretary**

It is difficult to realize that it is the end of another year of activity for the KMA. As we reflect on the previous year and look forward to the new challenges on the medical horizon, I feel that we can be proud of what we have done in the past and look forward with a great deal of confidence to the future.

It is with a great deal of pleasure that I would note that our membership is now at an all time high. The involvement of numerous physicians in the activities of KMA and in local societies is simply another indication of the earnest devotion to duty and unselfish giving of time by our KMA members. I feel that our increase in membership has been due in great part to our very active staff who has done such an excellent job and also to the example set by our leaders in KMA in attracting new members to our organization.

I would again urge all of our members to come to our building on Ephraim McDowell Drive. This is very easily accessible from the expressway and I feel that for those of you who have not visited the building since we have installed the new addition, it will be quite an experience for you. The new decorations in the building and the general appearance, I am sure, will make you proud of our new KMA Headquarters. It certainly is much more functional since the new addition and in the future will be able to handle the expanded activities of the KMA.

I am sure that you all are familiar with the organization of the new Medical Licensure Board which is headquartered in the new office building. This Board has been active in licensing all physicians who are engaged in practicing in Kentucky and I feel has been a long overdue innovation in medical licensing in Kentucky.

As Secretary, I have been a member of the Judicial Council, Board of Trustees, and Executive Committee. I have sat in on the many meetings and long hours with the gentlemen who comprise the com-

mittees. I would like to extend at this time my appreciation to all of these gentlemen for their unselfish devotion to duty to the KMA. I feel that the average physician really does not know how much time and effort these fine gentlemen put into their work for all of us in Kentucky. I am extremely proud to be associated with these gentlemen and have only admiration for their untiring efforts and giving of themselves towards the goals which we have set for ourselves in the interest of the promotion of medical care in Kentucky.

In order to realize just how much work is done at the executive level, one needs only to review the number of meetings which have been attended, the number of members in attendance and hours involved in meetings, and the number of doctor miles traveled. From July 15, 1972, through July 30, 1973, there have been nine Board of Trustees meetings which were in session for a total number of 941 doctor hours. There were 292 members in attendance and the number of doctor miles traveled was 13,569. The Executive Committee meetings were convened on four occasions. There were 149 doctor hours involving 31 members in attendance and 5,426 doctor miles traveled. Out-of-state meetings totaled six meetings which included 17 days spent out of state with 41 M.D.s involved and 56,600 miles covered. The total number of committee meetings held was 74. The total number of members in attendance was 421, number of hours spent in the meetings was 1,272 and the number of miles traveled was 60,777. The total mileage of the Board, Executive Committee, and regular committee meetings involved 78,640 miles and if you include the out-of-state meetings, the mileage is 139,417 miles. This certainly is a rather substantial work load and I think that this would indicate the enthusiasm and sense of responsibility that these men feel for their appointed posts and they have certainly been diligent and faithful in carrying out their responsibilities.

It is always a privilege to give credit to the tremendous amount of work which has been done by our KMA staff who do such an excellent job organizing and staffing the numerous committee meetings as well as the Board of Trustees and Executive Committee meetings. All of the meetings which are related to KMA work have been previously organized by the staff and certain members of the staff are responsible for attending each of these meetings and reporting back to the Executive Director and also helping to record the results of the meetings and future responsibilities for the committees. The staff also organizes and carries out the duties for the annual convention as well as the interim meetings which we have had in the past. This involves also endless hours of work and certainly our staff deserves a strong vote of thanks and appreciation for the excellent work that they have done in the past year.

It is with eager anticipation that I look forward to another year working with all of these fine gentlemen as KMA continues to enlarge and the duties become more and more numerous. We all have to put our shoulder to the wheel and push a little harder. It is only through our combined effort

and pulling together that we can accomplish those purposes for which our organization was originally formed and that is for the improvement of health care and continuing good health for the people of our great Commonwealth of Kentucky.

Thank you.

S. Randolph Scheen, M.D., Secretary

#### Recommendations, Reference Committee No. 1

The Report of the Secretary was reviewed in its entirety, and the committee was impressed with the great number of meetings and great number of doctor miles traveled. This is indicative of the great effort that is being expended on behalf of KMA and the people of Kentucky.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

## Report of the Editor

The editors of *The Journal* have met on a monthly basis during this past year to evaluate editorial policies, articles submitted for publication, advertising schedules and the general management of this KMA publication.

The quality of scientific material has been maintained through the efforts of the Scientific Editor, Charles C. Smith, Jr., M.D. and the Board of Consultants. Doctors Henry Asman and Evan Overstreet are to be commended for their excellent work during this past year.

In keeping with the directives of the KMA Constitution for *The Journal* as the "official organ of the Association," the editorial board continues to look for ways to serve Kentucky physicians. This year, Interim Meeting speeches were published for those who were not able to attend and the official KMA-KBA Interprofessional Code was printed in its entirety for the membership. A postgraduate opportunities page is maintained monthly.

Two new features brought about this year were the Kentucky Foundation for Medical Care Page and "A Committee Reports . . ." which provides an outlet for physicians and staff attending out-of-state meetings to publish reports for the KMA membership.

The editorial board is always receptive to any ideas which would increase the usefulness of *The Journal* of KMA.

Walter I. Hume, Jr., M.D., Editor

#### Recommendations, Reference Committee No. 1

The Report of the Editor was reviewed. The Editor and his staff are to be complimented for the continued excellence of our Journal.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

## Report of the Treasurer

You will find enclosed in your House of Delegates envelope a Statement of Financial Condition of the Kentucky Medical Association as of June 30, 1973,



a Statement of the Changes in the Fund Balances, and Condensed Statements of Income and Expense of the Current Fund, Reserve Fund, McDowell House and the Postgraduate Medical Education Fund for the year ending June 30, 1973.

The complete report of audit for the fiscal year ending June 30, 1973, is available to all members of the Kentucky Medical Association at the KMA Headquarters Office, 3532 Ephraim McDowell Drive, Louisville, Kentucky.

At this meeting in 1970, we discussed a five year financial plan; and I am pleased to report that we are operating well within the limits of that plan—even better than projected.

Keith P. Smith, M.D., Treasurer

#### Recommendations, Reference Committee No. 1

The Report of the Treasurer was reviewed with the help of a representative of KMA's auditing firm. It was noted the financial condition of the Association is on a very sound basis and is well within the projected five year goal. The Treasurer and staff are to be commended for the increased savings noted during the past year. However, it was noted that the deficit from publication of *The Journal* was greater this year than last year.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

## Report of the Delegates to AMA

The Clinical Convention of the American Medical Association was held in Cincinnati, Ohio, November 26-29, 1972. The House for the first time discussed the recent law of PSRO's-Professional Standards Review Organizations, and the House adopted a policy that the AMA should provide a dominant role of leadership in the implementation of the PSRO program by formation of an Advisory Committee on the subject which will include members of the Board of Trustees and the Council on Medical Services, and the Board may invite other appropriate organizations. Among the responsibilities of the Committee are:

1. To provide input into the medical profession in the development of rules and regulations which will govern the PSRO program.
2. To assist state medical associations, or state medical associations in concert with county medical societies, in developing PSRO's and to recommend structures and operating mechanisms for such organizations.
3. To aid in defining appropriate geographic boundaries for PSRO's, especially where more than one state may be involved.

Other ideas on this Committee were to monitor the effect of PSRO on medical care and to report at each future House session.

Doctor Hoffman in his address to the House reported on his recent survey of health care systems, and stated that what was of more interest to him was the fact that the health care problems of the United States are to be found in other nations where

economic, political and cultural conditions are so different from ours. He commented upon the question of lack of, he felt, adequate insurance coverage for catastrophic illness, and pointed out that insurance executives had told him that this was an insoluble problem at the present time at the present rate of premiums. In regard to maldistribution of doctors, Doctor Hoffman suggested that perhaps a way to get physicians into rural areas on a strictly voluntary program would be state or federal financing the education with an unbreakable contract to practice in needy areas for three to four years. He suggested temporary licenses in order that this contract be honored until the period of service was completed.

In regard to doctor shortages in the inner cities, Doctor Hoffman stated that part of the solution might lie in better establishment and use of neighborhood health centers, and his remarks were referred to the Council on Medical Services for consideration.

Regarding the budget and financial restraint, the AMA Office of Finance and the Finance Committee were congratulated on their budgetary report, and I noted that the Board of Trustees had made a determined effort to exercise fiscal restraint in allocating the financial resources according to priorities. Examples of fiscal restraint taken by the Board of Trustees included the termination of four councils and six committees. Another economy action taken was making specialty journals available on subscription only. *Prism*, the AMA's new socio-economic publication, will be sent as a membership benefit, along with *JAMA*.

Reporting on consideration of medical care of the poor, the House in 1971 urged the creation of state and local medical society committees concerned with health care of the poor, and it was noted that 23 state and 29 local societies have set up such programs, and are now developing them to improve the health care services. The House urged organized medicine to continue to provide assistance to the free care clinics, and noted that they are increasing throughout the nation. It was felt that by this liaison with these units the physicians could monitor the services and be sure that they were utilized in the proper manner.

In regard to the blood banks, the House adopted Report N of the Board dealing with the new federal regulations regarding collection and distribution of blood, and suggested that the operating standards of the American Association of Blood Banks and the American Red Cross be recognized and accepted. In regard to young physicians, the Council on Long Range Planning and Development will be expanded to include one Intern and Resident member of the AMA as a full voting Council member. Also for the first time in the history of the AMA, a medical student took his seat in the House of Delegates as a full voting member of the House of Delegates of the AMA. The House also was informed that the Internal Revenue Service ruling which barred physicians from withdrawing voluntary contributions on their Keogh plan prior to disability or age 59-1/2 will be revised to permit withdrawals of such contributions made to a qualified plan prior to March 6, 1972. The AMA had protested this ruling, and the

delegates complimented the AMA staff for its prompt and effective action in this regard.

The annual meeting of the American Medical Association was held in New York City, June 24-28, 1973. The House of Delegates was presented with the largest volume of material of any House in the history of the American Medical Association for consideration. The material consisted of 84 reports and 179 resolutions.

The material was a variety of problems including Professional Standards Review Organization, price controls, institutional licensure, need for primary care physicians and multiple other subjects of present interest to the medical profession.

The House of Delegates selected as President-Elect of the American Medical Association, Doctor Malcolm Todd, of California. This election was a departure from the usual method of selection, as in most cases a member of the Board of Trustees is selected for the President-Elect. However, the election of Doctor Todd was expected as he has been an outstanding member of the House of Delegates for many years, and has shown himself to be a leader of medicine.

The inaugural address of President-Elect Russell Roth was well received. He enumerated multiple problems facing medicine and the medical profession today, and made a plea for unity in action of the medical profession, and suggested that each physician make his contribution to the profession to which he is a part. Doctor Roth pointed out the complexities of medicine in the field of socio-economics, health care, legislation and education, and pointed out that the American Medical Association is the only systematized organization which can successfully cope with most of these problems in the present complexities that are presented to us.

Doctor Hoffman, the retiring President of the American Medical Association, admonished the AMA to continue its efforts for improvement in the health care fields, and rather than diminish the educational requirements for physicians, stated that they should be extended. He also suggested a restoration of rotating internships for the benefit of community hospitals and for the good of the primary care physician. Doctor Hoffman made a plea to keep basic objectives in perspective regarding the continued improvement in the quality of health care, the patient-physician relationship and the freedom of choice in medical relationships.

Among the multiple aspects of medicine which were presented to the House were those pertaining to the physician and the government— 1) the PSRO law should have a high degree of medical input in the government regulations through representatives of the American medical profession. 2) The House opposed the institutional licensure of physicians and nurses. 3) Quality assurance programs: The House suggested the AMA meet and offer suggestions and a testing of the limited number of hospitals in this project. 4) Suggested support of medical staffs to include the regulations regarding having increased number of medical representatives on hospital staffs and support the code of ethics in this project, supported the

certificate of need law approach in principle, with final authority resting in Boards which include representation by physicians in the active practice of medicine. 5) Suggested national health care for migrant workers and suggested that they be developed under the Council on Medical Services.

**Association and Internal Matters of the House.** The House acted on proposals of protecting the interest of the practicing physician, strengthening membership, improving the response of the Association to the constituency, and making the Association more responsive to the membership. Other items concerning unions, malpractice, dues charges, periods of office, and separation of the business and scientific meetings were discussed.

**Intern-Resident Membership on Councils.** (The House approved Report GG of the Board of Trustees which outlines the proposed formation of a Medical Liability Commission to represent health care providers in dealing with medical malpractice problems.) The House supported the youth movement of the intern-residency division of the House and voted that they should have memberships on the Councils of Medical Services and Medical Education, as well as a liaison member for the Council on Forward Planning.

The terms of the members of the Board of Trustees were considered, and will be further studied in the next meeting of the House of Delegates.

A Formal Planning System for the AMA was approved. It was designed to enable the AMA to sense changes in attitudes, to sharpen its objectives, to allocate resources, measure progress and improve communications between the AMA and constituent societies and memberships.

Other items for completeness may be obtained through your KMA Headquarters, and complete records of the meeting are kept in this Headquarters office for your investigation.

I am indebted to the Officers and Directors of KMA, to the Delegates, Alternate Delegates and to our able staff who have assisted me in obtaining this material for this report to you.

J. Thomas Giannini, M.D., Senior Delegate

#### **Recommendations, Reference Committee No. 1**

The Report of the Delegates to the AMA was reviewed. We wish to commend them on their representation of our state to the AMA and their efforts to promote matters which are in the best interest of organized medicine. We appreciate the thoroughness and informativeness of the report of the Annual and Clinical Meetings of the AMA House of Delegates.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

### **Report of the Executive Director**

This year I will not attempt to make my report as detailed or as lengthy as that of last year when I reviewed the duties of each executive staff member



and also provided you with a ten-year summary of Association activities.

### *Headquarters Office Building*

The new addition to our Headquarters office building has now been complete a little over one year and has proven to be a valuable asset to us. It has filled a critical need for meeting and office space.

Within the Headquarters office, there is an ever increasing tempo of activity. There are six telephone lines in use; the volume of mail is growing on an almost daily basis; and "pedestrian" traffic has been steadily moving upward with additional meetings, a rapidly expanding Licensure Department, and many other related activities.

### *Meetings*

There is a myriad of activities underway at the Headquarters office, and every employee must be a "jack of all trades." However, if anyone ever insisted that one word be used to describe the role of our staff, I suppose it would be *Meetings*. Most of the staff are usually in the process of preparing for a meeting, sitting in one, or "cleaning up" by implementing actions after one. Some meetings are only a few hours long while others may last a week. The work involved in preparing for this Annual Meeting and the efforts required to conduct it speak for themselves.

It might be interesting to note that your executive staff averages at least one meeting every working day of the year. There may be some days when no meetings are held and other days when as many as six are conducted, so our records indicate that we average more than one meeting per day. Since many such sessions require more than one executive staff member, in addition to a secretary, it might be an astounding figure to know just how many hundreds of hours are spent annually in meetings. Added to the hours spent in meetings, there is also considerable time involved in getting to and returning from those not held in Louisville or even in Kentucky.

### *New Activities*

A new aspect of staff involvement has been the administration of the Board of Medical Licensure since January 1. This three-employee department has substantially increased the volume of mail and visitors we receive daily. They have administered the Doctor of Medicine examination to over 300 physicians this past year and are now preparing for their next "testing period" which will be held in December.

As this report is being written, many staff hours have already been consumed as a result of the PSRO Law. However, we yet have to learn what the final outcome will be or the involvement that will be required once guidelines are written. Our role has been one of preparation and that, I believe, we have accomplished.

The strong involvement of government and the pattern of utilizing initials has made the following an everyday part of our lives: PSRO, EMCRO, BHI, SSA, KMAP, HIP, HSD, CHAP, HMO, QAP, CHAMPUS, OEO, HASP, RMP, MAI, NIH,

HSMHA, HEW, KFMC, HUP, PSRC, etc., etc. Not only do all of these initials have a very special meaning, but they may have a very strong impact on the practice of medicine. Staff must not only be aware and knowledgeable, but ready to assist our membership in preparing for whatever role KMA may be called upon to play in the implementation of new programs.

In our efforts to bring KMA still "closer to home" to our membership, we are attempting to provide more tangible benefits which the members can identify with their professional organization. Just two of the many new benefits are in the area of auto leasing and group health insurance. Under consideration are such things as liability insurance, life insurance, disability insurance, and national and international tours. I would hope that individual members would let our officers know of areas in which they feel KMA could better serve them and better provide them with such tangible programs.

### *Conservation of Funds*

With today's skyrocketing prices and sporadic shortage of supplies, I believe your staff is as conscientious as possible about the financing of the operation of KMA. We have challenged ourselves to provide the most efficient quantity and highest quality of work production possible. Working with the Treasurer and Budget Committee, we feel we are ahead of the "five year dues schedule" when dues were raised in 1970 by the House of Delegates even though the \$130 annual dues voted then would need to be \$147.75 to purchase the same supplies and services today. The refining of cost saving practices and the generation of additional income has been successful and remains a part of our daily planning process.

While the challenges to organized medicine continue to increase with each passing year of this decade, we have operated during 1973 with one vacancy existing on the Executive Staff which was created by the transfer of one man to the new Department of Medical Licensure. It is anticipated that this vacancy will have to be filled as we move toward the opening of the 1974 Kentucky General Assembly when we routinely lose two staff men for three months from the office for lobbying purposes. In addition, the usual heavy work load increases substantially during a legislative session.

### *Appreciation*

I would be remiss if I did not express a very deep heartfelt thanks to an extremely efficient and dedicated staff. Their work may sometimes be hidden; but even in the reports submitted to the House of Delegates, you can find evidence of many hours of staff effort. We would proudly stack them up against any group anywhere.

I feel we have knitted together excellent team players with enthusiastic team spirit. I think their dedication is demonstrated by their loyalty to the Association. My faith in them and understanding of them has grown in the 5-1/2 years I have served in my present capacity, and I must admit I take some pride that no executive staff member has left our

employ during that time. We must be similar to the profession in one respect—A problem must be judged and considered by all of us, some with differing opinions; so even though we may not always walk the road unanimously, we do so in unity.

All of us on the staff also want to express our thanks and appreciation for the time, efforts, and guidance of our officers, committee members, and the general membership of KMA.

We would not want to miss anyone, but feel that we would specifically like to thank such officials as our Treasurer and *Journal* Editor with whom we confer quite often, our President and Board Chairman who can expect to hear from us almost daily, and a very special thanks to our Secretary who we feel is the unsung hero of KMA because with him we have more than daily contact. By virtue of his position, location, and three year office term, he is continually representing you with the public, allied organizations, and with staff.

With the beginning of a new Associational year, we carefully critique the actions and activities just past and plan for the future, with your guidance, to best serve the physicians of Kentucky and its citizenry—your patients.

On behalf of the entire staff, we thank each of you for the opportunities afforded us.

Robert G. Cox, Executive Director

#### **Recommendations, Reference Committee No. 1**

The Report of the Executive Director was reviewed in detail. We wish to compliment the Director for his hard work and the staff for the many and varied duties they have performed so well this past year. We especially noted the paragraph dealing with the conservation of KMA funds and commend this worthwhile activity.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

### **Report of the Advisory Committee to Woman's Auxiliary**

The Advisory Committee to the Woman's Auxiliary was not called upon for recommendations this year, subsequently no meetings were held. However, we remain available for consultations.

We are of the opinion that the Committee can be a very helpful one and should be continued.

Walter L. Cawood, M.D., Chairman

#### **Recommendations, Reference Committee No. 1**

The Report of the Advisory Committee of the Woman's Auxiliary was reviewed.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

## **Resolution B**

### **Bullitt County Medical Society**

WHEREAS, physician distribution continues to be widely discussed by both lay and professional groups, and

WHEREAS, Medicare, Medicaid and private third party carriers under the UCR program continue to have low "maximum allowable fees" in most rural areas and areas of physician need, and

WHEREAS, low "maximum allowable fees" tend to make these areas less attractive as places to practice and tend to decrease the bargaining power of the people living in these areas to attract physicians, and

WHEREAS, the KMA House of Delegates in 1971 and 1972 passed resolutions favoring a UCR fee structure for third party carriers based on the "state as a whole," and

WHEREAS, KMA leadership efforts to implement these resolutions have been resisted as anticipated by third party carriers, and

WHEREAS, KMA leadership by its decision to discontinue efforts to implement these resolutions has acknowledged its ineffectiveness in influencing the policies of third party carriers, therefore be it

RESOLVED, that the KMA House of Delegates direct its leadership to continue its efforts to improve physician distribution by seeking to improve the fee structure of third party carriers.

#### **Recommendations, Reference Committee No. 1**

Resolution B, Physician Distribution, introduced by the Bullitt County Medical Society was felt to be a restatement of a known problem that has been dealt with in the past in Resolution H of 1972. Also, it is felt that third party payment is not an issue in physician distribution.

Mr. Speaker, I move the rejection of this Resolution B.

(Motion was seconded and carried.)

## **Resolution J**

### **Fayette County Medical Society**

WHEREAS, the pace of organized medicine is accelerating, and

WHEREAS, the Board of Trustees of the Kentucky Medical Association has to function for a year without input from its membership; for example, the Annual Meeting in September 1972, PSRO passed in October 1972 and no direct Society action until September 1973; therefore, be it

RESOLVED, that the House of Delegates consider the establishment of a spring meeting of the House of Delegates to insure prompt consideration of vital matters and to insure membership participation in affairs of the Association.

#### **Recommendations, Reference Committee No. 1**

Resolution J, Spring Meeting of House of Delegates, introduced by the Fayette County Medical



Society was reviewed. It was felt that certain considerations, such as the cost factor and attendance, would be significant potential problems.

Mr. Speaker, I move that this Resolution be accepted and referred to the committee which is studying interim meetings.

(Motion was seconded and carried.)

## Resolution M

### Fayette County Medical Society

WHEREAS, the national priorities and KMA goals and objectives have undergone substantial change, and

WHEREAS, President Hess' report draws attention to the need to recognize these and other factors, and

WHEREAS, the KMA has not conducted an in-depth study of its organizational structure in a number of years in relation to emerging health priorities and external health organizational structures and programs, be it

RESOLVED, that the Board of Trustees create a task force to study organizational structure in relation to current challenges and problems facing the organization.

#### Recommendations, Reference Committee No. 1

Resolution M, Realignment of KMA Organizational Structure with Goals and Objectives, introduced by the Fayette County Medical Society was reviewed; and it was felt that it is in line with recommendations in Report No. 1.

Mr. Speaker, I move the adoption and implementation of this Resolution.

(Motion was seconded and carried.)

## Resolution Q

### W. Neville Caudill, M.D.

WHEREAS, in the laudable attempt to provide adequate medical care for all people, governments, and medical care intermediaries have not infrequently acted precipitously (if not capriciously) in establishing medical care programs and policies; and,

WHEREAS, the inevitable consequences of such actions have proven to be fiscally disastrous and often counter-projective; and,

WHEREAS, such agencies are characteristically not capable of admitting and remedying their own basic errors, but have inevitably sought to place the blame for their own foibles on extrinsic factors; and,

WHEREAS, physicians, as a group, have provided a convenient and highly visible scapegoat for such failures of foresight and planning; and,

WHEREAS, as a result of this "scapegoatism" the ability of physicians to prescribe for and treat their patients as *individuals* (as opposed to computerized norms) is being constantly eroded and the physician is increasingly being harassed by restrictions not applied to any other profession or segment of the economy (including other "Health Care Providers"); and,

WHEREAS there is no hope of redress from the

legislative nor executive branches of government; be it therefore

RESOLVED that the KMA establish a "Legal Trust Fund" with the following purposes and mechanisms:

The purpose of this fund will be to support the legal efforts of any active KMA member to effect change of or gain redress from legislation, governmental regulations, or "third-party" policies which, subject to the stipulations below, adversely affect the practice of medicine, patient protection, or physicians' rights either as individuals or professionals.

Such support will be granted by the Trustee of the fund only to those issues which have widespread or potentially widespread effects on medical practice, physicians' or patients' rights.

The Trustee of the fund will be the KMA Board of Trustees.

The decision to support a cause may be made only after advice of KMA counsel and will require affirmative vote of 3/4 of the KMA Trustees present and voting at a regularly scheduled meeting of the Board of Trustees. All such decisions will be final and unappealable unless, by unanimous consent, the Board votes to reconsider the matter at a later date.

Having underwritten a cause, the Trustee is obligated to continue its support to the highest judicial level possible consistent with the advice of KMA and plaintiff physician's counsel.

The support given should ordinarily cover all legal and physician expenses (*vide infra*) but may be less at the discretion of the Trustees.

The fund will be provided by a \$3 per annum assessment of the entire active KMA membership. Should the expenses exceed limits of the fund in a given year, the Trustee may assess the KMA active membership for sufficient funds to carry litigation forward without interruption. This will be done as a special assessment, but will carry the same obligation as KMA dues.

Any physician requesting support by the trust fund must do so in writing at least six weeks before the next scheduled meeting of the KMA Board of Trustees. Such requests will immediately be forwarded to all KMA Trustees and to KMA Counsel for formulation of legal opinion.

All requests must clearly relate the cause of grievance and the principle(s) upon which the complaint is based—in language comprehensible to a (legalistic) layman.

Although not strictly necessary, it is advisable that any physician applying for support from the trust fund consult his personal attorney for competent opinion of the merits and practicality of legal action, and the preparation of the request prior to submission of that request.

If, in the opinion of the Trustee, the trust contains sufficient funds for the projected need in the ensuing year, the per annum assessment shall be held in abeyance until such time as replenishment of the fund shall be deemed necessary by the Trustee.

Funds from the trust may be invested for capital growth as seems prudent to the Trustee, but monies

must always be available to support the stated purpose of the fund.

Trust funds will be used only to pay for legal costs and expenses of the physician(s) involved in the case. The physician expenses will be restricted to travel, lodging and food costs incurred as a result of the litigation, and commensurate with business expenses ordinarily provided for KMA employees. In no case will involved physicians be reimbursed for time lost from practice.

No funds from the trust may be paid to KMA employees nor to KMA counsel (including any firm of which he is a member or in which he has personal interest).

If the outcome of litigation results in a monetary award to the plaintiff physician, he must agree in advance that all funds provided by the trust in the conduct of the case will be repaid (interest free) up to the limits of the judgment—any surplus monies will belong to the plaintiff.

If the outcome of the litigation is adverse or results in no monetary award the plaintiff physician will have no financial obligation to the trust fund.

The Trustee is empowered to impose other administrative procedures and regulations as necessary to the administration of this trust as long as such procedures and regulations in no way compromise nor contravene the principles embodied in this resolution.

The specific activities of this trust will be reported to the KMA membership annually as part of the report of the President of the Board of Trustees.

#### **Recommendations, Reference Committee No. 1**

Resolution Q, Legal Trust Fund, introduced by W. Neville Caudill, M.D. was reviewed in great length. It was felt that the Resolution is desirable and necessary in its intent. It is recommended that in paragraph number one, "medical care intermediaries" be changed to "third party payers." (This change was accepted by Doctor Caudill.)

Mr. Speaker, I move that this Resolution be accepted and referred to an ad hoc committee appointed by the Board of Trustees for study.

(Motion was seconded but defeated.)

William P. VonderHaar, M.D., Louisville, moved the adoption and implementation of Resolution Q as amended by Reference Committee No. 1

(Motion was seconded and carried.)

Mr. Speaker, I move the adoption of the report of Reference Committee No. 1 as a whole as amended.

(Motion was seconded and carried.)

Mr. Speaker, as Chairman, I wish to thank all members of this committee for their efforts in helping to prepare this report. I would also like to thank Mrs. Janet Williams for her excellent help in preparing this report.

#### **REFERENCE COMMITTEE NO. 1**

John E. Trevey, M.D., Lexington, Chairman

L. F. Beasley, M.D., Franklin

Glenn W. Bryant, M.D., Louisville

C. David Eversole, M.D., Covington

A. B. Richards, M.D., Louisa

## **REFERENCE COMMITTEE NO. 2**

*Earl P. Oliver, M.D., Scottsville, Chairman*

Reference Committee No. 2 considered the following reports:

15. Report of the Scientific Program Committee

16. Report of the Scientific Exhibits Committee

17. Report of the Hospital Committee

18. Report of the Emergency Medical Care Committee, Paragraph 4 on Page 1 relating to changes in the Medical Practice Act, is referred to Reference Committee No. 3

42. Report of the Committee on Medicine and Religion

12. Report of the Kentucky Foundation for Medical Care, portions of the report dealing with the Report of the Continuing Medical Education Committee, only

19. Report of the Advisory Committee to Blue Cross and Blue Shield, Paragraph 1 on Page 3 relating to Emergency Rooms, only

Resolution K—Section B. Continuing Education Requirements for Kentucky Physicians, KMA-KFMC Medical Education Committee (Fayette County Medical Society)

## **Report of the Scientific Program Committee**

The KMA Scientific Program Committee generally meets for approximately two hours to plan the scientific program for the KMA Annual Meeting. This meeting then generates ten months of work for your committee and staff. During this time, your committee members, chairman, and staff are continuously involved in a multitude of phone calls, personal contacts, and volumes of correspondence necessary in putting this program together.

Early in the Associational Year, your chairman and the KMA President met with the 17 specialty group presidents to discuss their participation in planning the scientific sessions. The scientific programs of the specialty groups held in conjunction with our general sessions have proven to be valuable, and we feel provide an excellent contribution to the continuing education of our members.

I am appreciative of the splendid cooperation in the planning of the overall meeting we always receive from the specialty groups.

This year we are looking forward to holding our meeting in a new facility, and feel that it will be a pleasant experience for all concerned. The Scientific Program Committee's objective is to present an appealing and educational program that will provide maximum benefit to the members of KMA; and certainly, providing this educational program in pleasant surroundings will be helpful.

It has been the committee's experience in the past that the selection of themes for portions of the scientific program has proven to be beneficial and that policy has been carried over into this year's session. The themes are designed to maintain the continuity



of the program and afford an opportunity for in-depth coverage of the subject.

This year's program will be comprised of individual presentations, and the committee members and specialty groups have gone to great length to bring in who, we feel, are some of the country's outstanding speakers. A feature of this year's program will be in-room closed circuit color television, which is being sponsored by the American Medical Association. Each afternoon, from 5 p.m. to 1 a.m., pre-recorded programs of scientific subjects will be presented along with interviews of KMA officials. We hope you will find this to be an appealing addition to this year's meeting.

This year, as in the past, the South Central Bell Telephone Company is sponsoring a message center in the Technical Exhibit Hall. This continues to be a valuable service to our Association membership, and we are most appreciative for it.

Your Chairman is thankful to those who assisted in the formation of this program, and I would like to give a special note of appreciation to the committee members, specialty group presidents, and the program chairmen.

Any suggestions the membership might have for future programs will be most welcome.

R. Glenn Greene, M.D., Chairman

#### **Recommendations, Reference Committee No. 2**

The reference committee wishes to commend the Scientific Program Committee for the excellent quality of program presented this year. We want to express appreciation to the American Medical Association for its sponsoring of in-room closed circuit color television. We again wish to thank the South Central Bell Telephone Company on behalf of the Kentucky Medical Association for sponsorship of the message center.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

### **Report of the Scientific Exhibits Committee**

The Committee on Scientific Exhibits meets late in the Associational year in order to review applications for scientific exhibit space at the Annual Meeting. As a result, it has become customary for the Committee to submit a final report prior to the meeting to make sure that it will be included with all committee reports.

This year we hope to have approximately 15 exhibits, which will be located along the entrance to the general assembly hall in the Bluegrass Convention Center. The scientific exhibitors will be available to discuss their exhibits and will have special badges and ribbons to identify themselves.

Exhibitors will receive a certificate for participating in this phase of continuing medical education. Our Committee feels that the scientific exhibit is a valuable contribution to postgraduate physician edu-

cation, and is hopeful that anyone attending the Annual Meeting will visit the exhibits.

Arnold C. Williams, M.D., Chairman

#### **Recommendations, Reference Committee No. 2**

The reference committee is pleased to see that the quality of the scientific exhibits remains high and commends the Scientific Exhibits Committee for its activities. We feel that the scientific exhibit is a valuable contribution to postgraduate physician education.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

### **Report of the Hospital Committee**

The Committee met on March 21, 1973 and May 31, 1973 with good attendance by members and guests.

The Committee heard reports that the physician awareness of hospital costs program had been implemented and that all hospital chiefs-of-staff had been urged to establish and maintain "on call" rosters in Kentucky hospitals as recommended by the last House of Delegates.

An overview of PSRO and its relationship to the Hospital Committee was carried out with no immediate specific recommendations or actions.

The Committee has been asked to work toward the execution of an educational program on the proper use of the emergency room. This request came as a result of some confusion over charges in emergency room coverage and the methods of reimbursement for physician services provided.

Problems concerning emergency rooms are varied and complex and the Committee hopes to develop a program which will be useful to physicians and hospitals as well as the general public. We hope to forward specific recommendations to the Board of Trustees in the very near future. It is apparent that this will be a long-term project and will be carried out with the cooperation of the Kentucky Hospital Association, Blue Cross-Blue Shield-Delta Dental and commercial carriers.

The Committee enthusiastically commends those members of the "Dry Run" teams who regularly provide, without compensation, expert review of hospitals who intend to become accredited. As Chairman, I wish to thank the members of the Committee for their continued interest and activity.

Richard B. McElvein, M.D., Chairman

#### **Recommendations, Reference Committee No. 2**

The Report of the Hospital Committee was reviewed with particular attention focused on recommendations dealing with an educational program for the purpose of informing the insured regarding the extent of their coverage. The reference committee endorses this portion of the recommendation and

looks forward to less patient-physician misunderstanding when this program is implemented.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

## **Report of the Emergency Medical Care Committee**

The KMA Emergency Medical Care Committee has just completed a very active year. The committee met three times and we were pleased to have representatives from the various health agencies from across the state interested in emergency medical services meet with us.

Last year the Committee recommended that part of this year's KMA Annual Meeting Scientific Program contain a section on critical care medicine and we are pleased to report that this is being implemented. We urged everyone to attend the opening Scientific Session on Tuesday morning. We feel that critical care medicine is becoming more and more important and are gratified to see that the Association is continuing its interest in this area.

The Committee heard several reports on the MAST Program (Military Assistance to Safety and Traffic) which is designed to help relieve emergency transportation problems through the use of army helicopters. We understand that the implementation of the program in central and eastern Kentucky depends on allocation of congressional funds. The Committee is of the opinion that this program is extremely worthwhile and feels that it will be a useful adjunct to existing emergency transportation systems.

Perhaps the biggest endeavor of the Committee this year was to plan and implement the Second Annual Emergency Room Nurses Seminar which was held June 14 and 15 at the Bluegrass Convention Center here in Louisville. Registration was well over 200 and we were pleased to have not only nurses but emergency medical technicians, state health officials, representatives of police agencies, and some physicians in attendance. We were honored to have David R. Boyd, M.D., of Chicago and his Chief Trauma Nurse, Teresa Romano, R.N., B.S.N., as our guests and we feel that the meeting was well received by all those in attendance.

The Committee has had some informal discussion as to the feasibility of expanding next year's program to include invitations to fire fighters, rescue teams, police departments and any other agencies that might have rescue squad and ambulance facilities. The program context would also be expanded, although the basic direction would remain toward emergency room nurses as it now is. The Committee enthusiastically urges that next year's meeting again be held in Louisville in June with specific details such as location and format to be worked out by the Committee.

We also spent a good deal of time this year discussing the feasibility of carrying out disaster drills at Kentucky's commercial airfields. The Committee is of the opinion that these would certainly be helpful both to the management of those airfields as well as

to the various agencies that would respond to an aircraft disaster. At our June meeting we had representatives of the Louisville Jefferson County Air Board, Airline Pilots Association and other agencies to discuss this subject in detail. It was the Committee's feeling that it would indeed be beneficial for these drills to be carried out and the Committee has recommended that county medical societies, in counties in which commercial airfields are located, work toward a simulated disaster to test the effectiveness of their emergency systems.

The Committee also investigated the feasibility of asking that first aid training be taught in all Kentucky secondary schools as a requirement for graduation. A subcommittee made up of members of this Committee and representatives of the Kentucky Education Association and Kentucky School Board Association was appointed and charged with the responsibility of looking into this matter further. It is hopeful that a recommendation will have been made to the Board of Trustees prior to the KMA Annual Meeting.

We were pleased to note the ongoing interest of the State Department of Highways in the emergency hospital signing along interstate highways. The Committee learned of one or two new signs put up this year and feel that this is certainly of benefit not only to the residents of Kentucky but to those visitors from out of state passing through as well.

The members of the Committee worked long and hard this year and I would like to express my appreciation to them for their time and efforts expended in the area of emergency health care.

E. Truman Mays, M.D., Chairman

### **Recommendations, Reference Committee No. 2**

The Report of the Emergency Medical Care Committee was reviewed with particular attention being given to the feasibility of teaching first aid training in secondary schools. The reference committee approved the idea of teaching first aid in secondary schools throughout Kentucky; however, it was brought out during the discussion that legislative action would be necessary to require a first aid course for graduation.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

## **Report of the Committee on Medicine and Religion**

The KMA Committee on Medicine and Religion did not meet during the past Associational year. As Chairman, I was unable, due to a lengthy illness, to be involved in any committee activities.

With this thought in mind, I would ask the indulgence of the Board of Trustees and House of Delegates of KMA for our lack of activity, but would like to reaffirm our deep and continuing interest in what we feel is a very worthwhile part of the activities of this Association.

As many of you know, the activities of the AMA



Medicine and Religion Committee have been very restricted and may possibly be phased out completely in a relatively short time. The Committee intends to stay abreast of these activities and to actively pursue our previously stated goals during the upcoming Associational year.

I would like to thank the members of the Committee and members of the Kentucky Chaplain's Association who have continued to give freely of their time to help improve liaison between physicians and the clergy in Kentucky.

J. Campbell Cantrill, M.D., Chairman

#### **Recommendations, Reference Committee No. 2**

The Report of the Committee on Medicine and Religion was reviewed. The reference committee commends the Committee on Medicine and Religion for its programs and workshops.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

## **Report of the Medical Education Committee and KFMC Continuing Medical Education Committee**

I am pleased to submit the report of this conjoint Committee. I wish to commend my associate Committee members and the KMA staff who worked unusually hard and persistently on a number of problems this year, including a specific charge from the KMA-KFMC Boards.

Chronologically the following events occurred:

*November 15:*

1. Received AMA accreditation of the scientific sessions of the KMA Annual Meeting for continuing education purposes.

2. Received a detailed report of the AMA Third National Conference of State Medical Association Representatives on continuing education.

3. As a result of Item 2, the Committee requested authorization from the KMA-KFMC to study and develop a KMA-sponsored systematic program in continuing education for its members. The study has proceeded throughout the year and was aimed at:

A. "Development of a KMA accreditation system for continuing education at various 'centers' throughout the state."

B. "Definition of appropriate continuing educational requirements for physicians with recommendations for action in cases of non-compliance."

C. "Definition of a systematic peer review mechanism acceptable for implementation and supervision of such educational requirements."

4. Received reports concerning and made suggestions for the development of the Biennial KMA Medical Education Conference, February 1 and 2, 1973 (see report of Conference - Appendix A)

*December 22:*

5. Doctor Seeley resigned as Chairman of the Committee, moving to the Judicial Council. Doctor Lemon

was appointed Chairman of the Committee in his place.

*February 1:*

6. Designated, on recommendation of their respective Deans, Borys Surawicz, M.D., University of Kentucky, and Ulrich Westphal, M.D., University of Louisville, to receive the annual KMA Faculty Scientific Achievement Awards at the Interim Meeting in March.

7. Pertinent to the study on continuing medical education, the Committee was fortunate in having a visit and the advice and counsel of Rutledge W. Howard, M.D., Associate Director of the Division of Medical Education of the AMA.

*March 8:*

8. Approved the preliminary recommendations of the subcommittees considering the items noted in Item 3 above, having to do with a continuing medical education system.

*March 28:*

9. The Chairman reported to the KFMC Board of Directors concerning the progress of the study and transmitted the request of the Committee for explicit endorsement of the study which it had undertaken. That endorsement was given on that date and transmitted to the Committee members by the Chairman in May.

*July 11:*

10. The Committee received, modified, and approved the completed reports and recommendations of its subcommittees in regard to a KMA plan for continuing education (see Recommendations - Appendix B)

In regard to the specific recommendations made in Appendix B, the Chairman notes that over a period of eight months various members of the Committee have spent considerable time in research and study of other state medical association programs and activities in continuing medical education. After much deliberation based on that study, the Committee has proposed its conclusions in the form of resolutions should the Board(s) find these appropriate to transmit to the House of Delegates.

The Committee has acted not only on the basis of its own intellectual concerns and interests but on the basis of the mandate handed down by the two Boards. It also points out that a desire for consistently available and accredited continuing education opportunities was strongly expressed by Kentucky physicians in a 1970 survey conducted under the auspices of the KMA, the Ohio Valley Regional Medical Program and the two Universities. We also note that same survey indicated a strong, but not majority, support by Kentucky physicians for a mandatory program in continuing medical education for all physicians.

One of the stimuli for this year-long effort has been Association concern over the advent of the Professional Standards Review Organization required by Public Law 92-603. The implications of that law, and its eventual implementation, have ever been in the Committee's view as we considered the program which is now being recommended. There are so many questions yet to be answered in regard to PSRO, however,

that the Committee has been able to suggest only vaguely a possible relationship between that prospective program's administrative mechanism and the ongoing continuing education system which we are recommending. To the extent possible, future KMA-KFMC medical education committees and PSRO organizations in Kentucky should collaborate in utilizing any PSRO data developed, in any way that is possible, to guide the development of continuing education programs for physicians.

We believe that the need to develop a firm KMA posture on a systematic program of continuous learning for all physicians is both important and urgent and hope that our work will be of some assistance to the KMA Boards and the House of Delegates in that regard. Thank you for your support of the Committee during this year.

Frank R. Lemon, M.D., Chairman

## APPENDIX A

The Committee sponsored the 1973 Biennial Medical Education Conference at Elizabethtown, February 1 and 2. The Conference was structured around four topics:

1. The Involvement of Medical Schools in Off-Campus (*Out Reach*) Programs.
2. The Trend toward *Corporate Responsibility* for Postgraduate Education.
3. Changing Concepts in *Pre-Doctoral Medical Education*.
4. Education for *Primary Team Care*.

Participants at the Conference were faculty members of the Universities of Louisville and Kentucky medical schools, the KMA Board of Trustees and individual KMA members. Approximately 85 participants were present at the session which developed into a productive and valuable exchange of ideas between educators and practitioners. The Committee notes, in this regard, its appreciation for the assistance provided by the Deans of both medical schools and the participating speakers with the development of a successful Conference.

## APPENDIX B

### Recommendations

Although the Committee thinks of the component parts of a continuing medical education system for KMA and its members as quite interrelated, it nevertheless makes recommendations in two areas under two different titles:

Section A: A KMA Accreditation System for Continuing Medical Education Centers in Kentucky  
Proposed Resolution:

WHEREAS, a recent survey of the continuing education needs and practices of Kentucky physicians indicated a widespread desire to participate in accredited programs, and

WHEREAS, the same survey indicated a general feeling that more locally available and "accredited" continuing education programs were needed, and

WHEREAS, the only AMA accredited center for continuing education in Kentucky is the University

of Kentucky Medical Center, and

WHEREAS, a current program of the AMA strongly encourages state medical societies to establish programs for the accreditation and surveillance of regional continuing education centers in their states, which base their curricula on the assessment of physician performance, therefore be it

RESOLVED, that the KMA establish an organized system for accrediting regional hospitals, medical or professional societies, or other institutional groups as approved "centers" for continuing education, offering such educational programs in a manner that will meet various categories of AMA and specialty society approval for continuing education, and be it further

RESOLVED, that with the establishment of such an accreditation system, the KMA itself seek accreditation from the AMA as an approved accrediting body according to the regulations and requirements that have been established by the AMA for this process, and be it further

RESOLVED, that any institution or organization seeking KMA accreditation as a continuing medical education center must meet the criteria and be subject to the administrative and regulatory provisions for eligibility, on-site surveys, and their costs, and the use of appeal mechanisms, as outlined in detail in the attached document: KMA Accreditation Program in Continuing Medical Education, and be it further

RESOLVED, that the objectives for the KMA in regard to continuing medical education be broadly defined as establishing a framework which will enable practicing physicians to easily update and maintain their medical skills, improve their efficiency, and improve the communications between academic faculties and practicing physicians.

Section B: Continuing Education Requirements for Kentucky Physicians

Proposed Resolution:

WHEREAS, one of the sincere desires of the conscientious physician, for himself, his patients, and his colleagues, is to maintain the practice of medicine at a high level of performance based on current knowledge, and

WHEREAS, a national trend increasingly calls physicians to be publicly accountable for their efforts in continuing medical education, and

WHEREAS, a systematic program for organizing and stimulating physician participation in continuing education could accomplish acceptable exposure to or participation in continuing medical education by all physicians, and

WHEREAS, Public Law 92-603 established both a national and a Kentucky requirement for a PSRO, with a concurrent systematic educational mechanism for developing a response to PSRO identified educational needs of physicians, and

WHEREAS, a number of specialty organizations have either established or are in the process of establishing educational requirements viewed as minimally essential and proper to the continued practice of the physician in the respective specialty field, therefore be it

RESOLVED, that the KMA endorse and hereby



call upon its staff to administratively establish a system for insuring the systematic participation of all physicians in continuing education based on the following components:

A. A continuing educational requirement in some detail, and by specialty, as described in the document: KMA Continuing Education Program for Physicians.

B. A proviso that the plan as herein adopted by the KMA may be modified from time to time, specialty by specialty, as recommended by respective specialty societies and approved by the KMA Board of Trustees.

C. A system for the collection of records and data, pertinent to establishing the compliance of physicians with those educational standards, which is open to all physicians licensed in Kentucky, whether KMA members or not.

D. Every physician to be allotted a period of three years from July 1, 1974, to furnish evidence of his compliance with the continuing education requirements of his specialty as spelled out in "A" above, and provided that continued compliance after the initial three years will be based on the same standards for subsequent three-year periods—or less, as indicated in the KMA plan.

and be it further  
RESOLVED, that the Kentucky Board of Medical Licensure be requested to require (by regulation) satisfactory participation in continuing education for annual re-registration of the license to practice medicine.

### **KMA Accreditation Program in Continuing Medical Education**

#### **FORWARD**

The purpose of this program is to help the medical staff of institutions or organizations, and community hospitals to develop effective continuing medical education. The concept of "lifetime of learning" has become an accepted fact to the practicing physician. The Kentucky Medical Association and the American Medical Association have undertaken programs of recognition of completion of minimal requirements of continuing medical education in an effort to implement this concept. In spite of the vast array of courses currently available, it is apparent that new approaches will be required to meet the demand. It is this Committee's recommendation that each community hospital establish this when possible, an education committee in cooperation with the local County Medical Society and that the effectiveness of the educational effort be evaluated by a review of the quality of medical care which affects changes in medical staff performance. The KMA, under the auspices of the AMA, will survey and accredit continuing medical education activities for community hospitals and other organizations seeking accreditation. The principles described in this manual are the general statements of criteria to be used by the survey teams in evaluating the quality of the educational efforts. These criteria are flexible and will be reviewed peri-

odically; from time to time, materials containing practical suggestions for determining educational needs and for the planning and evaluation of programs designed to meet these needs will be provided.

#### **ADMINISTRATIVE POLICIES**

**Survey Eligibility** — To be eligible for accrediting survey, the following standards are deemed as critically important aspects of hospitals or organizations commitment to improving patient care through continuing medical education:

##### *Standard #1: Administration*

1) There shall be explicit support of continuing medical education by the governing body, organized medical staff, and administration through continuing medical education committee having cross-membership with patient care review committee, including a wide range of sub-specialties in departmental representation.

2) There shall be a responsible educator and chief with supporting staff, including availability and use of expert knowledge of educational methods whenever practical.

There shall be evidence of coordination and cooperation with other educational programs in the area in sharing resources and evidence of efforts to meet the educational needs of physicians in the community.

##### *Standard #2: Budget*

There shall be evidence of financial support through provisions of a budget for continuing medical education of the attending staff.

##### *Standard #3: Teaching Staff*

There shall be evidence of a commitment from physicians of proven ability, training and experience, with interest and dedication to the development of a carefully planned educational program.

##### *Standard #4: Curriculum*

There shall be a mechanism of need assessment as developed through quality inpatient care review mechanisms.

There shall be a method of preparing clearly defined objectives for each educational activity based upon these need assessment procedures.

##### *Standard #5: Facilities*

There shall be adequate facilities to encourage participation in methods of education.

##### *Standard #6: Educational Methods*

There shall be planned learning experiences designed to bring about the specific objectives, selecting the most effective educational method for the particular needs, whether knowledge, skill, attitudes, or performance are to be changed.

##### *Standard #7: Method of Evaluation*

There shall be evaluation of each individual educational activity in the entire continuing education program of the institution, in terms of impact on the quality of patient care, through review procedures similar to those in following assessment of needs.

##### *Standard #8: Physicians' Record*

Each physician's record for participation in continuing education should be his improved ability to care for his patients and the stimulation of his own spirit of intellectual adventure.

#### *Standard #9: Survey Personnel*

A site team composed of three persons will conduct surveys: 1) An experienced site visitor, 2) A first-timer for a site accreditation visit, and 3) A representative of the local county medical society.

The amount of time spent in conducting the survey of each institution shall be determined by the Council on Education of the Kentucky Medical Association, but it is expected that each site visit will be of a one-day duration.

#### *Standard #10: Survey Fees*

A survey registration fee of \$50 will be charged by the KMA for administrative work connected with site visits. This shall be paid in advance at the time of submission of the pre-survey information. If the institution is not surveyed, the fee will be refunded.

The expense of the site visitors to include travel and food will be covered by the institution requesting accreditation. These expenses will be based on actual cost as determined following the site visit and paid to the site visitors directly. It is anticipated that no institution will have to pay more than \$200 for a site visit in addition to the \$50 paid to the KMA.

#### *Standard #11: Accreditation and Duration*

Each institutional organization that has been surveyed will be notified by the Council on Medical Education whether or not they have been accredited.

#### *Types of Accreditation:*

- 1) Accreditation of the institution or organization
- 2) Accreditation of the institution or organization contingent upon stipulated changes in the program. Accreditation granted when contingent is met (This classification applies in those cases where the program does not meet the requirements for accreditation but seemed to have the potential for doing so, would be for a limited only basis and a re-survey would be made within a stated period of one or two years).
- 3) Provisional accreditation of an institution or organization. (Applicable only to newly developed programs and with a time limit of one or two years).
- 4) Accreditation only of certain courses within an institutional or organizational setup rather than the entire institution. (This classification is to be given in cases where courses given by one department or branch of the institution are of high quality and those given by another area of the institution or organization are not of satisfactory quality for accreditation).
- 5) Non-accreditation of the institution or organization—in such cases, reasons for the recommendation will be given.
- 6) Accreditation decision and appeal—At the completion of the survey visit, a site team will hold a summation conference and submit its recommendation to the Council on Education of the KMA.

The Accreditation Commission of the Council on Education shall make a recommendation on accreditation and the subsequent decision shall be made by the full Council on Education.

- 7) A decision of the Accreditation Commission to deny or revoke accreditation because of the

recommendations of the site team shall entitle the institution or organization to provide additional information and further clarify the findings pertaining to the decision of the accreditation commission.

If accreditation is denied, an appeal in writing may be submitted to the Council on Education of the KMA with supporting information and data, questioning the recommendation and requesting reconsideration from the Accreditation Commission.

#### 8) Public Recognition

A Certificate of Accreditation shall be provided to an institution or organization that is granted accreditation. The Certificate shall specify the type of accreditation and the years for which it is granted. The institution or organization will be entitled to indicate on continuing education programs the type of accreditation approved for their institution and the category in which it is given.

### **KMA CONTINUING EDUCATION PROGRAM FOR PHYSICIANS (Educational Requirements by Specialty)**

#### **ANESTHESIOLOGY REQUIREMENTS**

1 credit for each hour of attendance at national, regional, or state society meetings, for that portion of the meeting devoted to scientific presentation and discussion.

1 credit for attendance at non-anesthesiology meetings such as mortality and morbidity conferences, state and county society meetings, and hospital surgical and medical conferences, when related to anesthesia.

1 credit for each hour of organized teaching whether medical school, hospital staff, inhalation therapy, etc. Limit 30 credits per three-year period.

25 credits for original papers or exhibits presented at county society or higher level, or published in a recognized medical journal.

Time credits for attendance at hospital staff meetings for that portion of the meeting given to scientific medical presentations—usually 30 minutes.

1 credit for each hour of audio-digest tapes, and/or recognized anesthesiology journals. Limit 75 credits per three-year period.

150 credits per triennium required.

#### **DERMATOLOGY REQUIREMENTS**

2 credits for each hour of attendance at local, state, regional, and national specialty society scientific meetings in dermatology such as:

Kentucky Dermatologic Society  
American Academy of Dermatology  
American Dermatological Association  
Society for Investigative Dermatology  
Others

2 credits for each hour of participation in, or attendance at, specialty postgraduate courses sponsored by a medical school or other educational organizations recognized as qualified to conduct meaningful courses in dermatology.



2 credits for each hour of attendance at AMA scientific programs, e.g., AMA Dermatology Section, sponsored by or relating to dermatology.

2 credits for each hour of formal or informal teaching to medical or allied medical personnel. Limit 90 credits per three-year period.

1 credit for each hour of attendance at hospital scientific programs. Limit of 30 credits per three-year period.

1 credit for each hour of participation in journal clubs, journal reading, or audio digest. Limit 30 credits per three-year period.

1 credit for each hour of attendance at component society or KMA scientific program. Limit 30 credits per three-year period.

1 credit for each hour of attendance at scientific programs of other generally recognized medical organizations not necessarily relating to your specialty, e.g., allergy, diabetes, surgery. Limit 60 credits per three-year period.

10 credits for preparing and publishing a scientific paper in a recognized professional journal, or for presenting such a paper to a medical or allied medical professional group.

150 credits per triennium required.

#### **FAMILY PRACTICE REQUIREMENTS** (also "General Practice")

Each family practitioner must complete 150 hours of acceptable postgraduate study every three years.

At least 50 credits must be obtained from prescribed scientific medical sources as follows:

A. AAFP produced programs.

B. Medical school or postgraduate medical produced programs.

C. Publication of an original scientific paper in a state or national scientific journal. Limit 10 credits per paper.

D. Presentation of an original scientific paper at the county medical society level or above. Limit 10 credits per paper.

E. Programmed instruction courses in (journal) on satisfactory completion of the entire course. Credit to be allowed as specified for each course.

F. Teaching medical students or physicians. One credit for each hour, with a limit of 20 credits for each three years.

G. Special programs, in states without medical schools, may be approved by the Commission on Education of the AAFP at least 30 days in advance.

H. Hospital residency training. Credit to be determined by the Council on Medical Education.

The remaining credits may be obtained from elective scientific medical sources as follows:

A. The scientific meetings of the American Medical Association and the state, district, and county medical societies. When not approved for prescribed credit.

B. Hospital scientific meetings, staff, CPC and other formal programs.

C. Other scientific postgraduate medical programs.

D. Approved medical school correspondence

courses. Limit 15 credits each three years.

E. Preparation and presentation of a scientific medical exhibit at the state level or above. Limit 10 credits per exhibit.

F. Hours spent in any field of postgraduate medical study may be submitted as elective credits for consideration by the Council on Medical Education.

Requirements may be fulfilled by completing all or any portion of the 150 credits in prescribed credits. However, minimum acceptable prescribed credits are 50 each three years.

150 credits per triennium required, at least 50 from prescribed sources.

#### **INTERNAL MEDICINE REQUIREMENTS**

2 credits for each hour of attendance at national and regional medical meetings.

2 credits for each hour of attendance at Kentucky ACP Annual Meeting.

2 credits for each hour of attendance at Kentucky ACP Monthly scientific meetings.

2 credits for each hour of attendance at postgraduate education courses in internal medicine.

2 credits for each hour of attendance at hospital medical department conferences.

2 credits for each hour of making a presentation before a hospital medical staff.

2 credits for each hour of attendance at a medical school department conference.

10 credits for presenting or publishing a scientific paper.

1 credit for each hour of attendance at state medical association meetings.

1 credit for each hour of attendance at component medical society meetings.

1 credit for each hour of attendance at local medical meetings.

1 credit for each hour of journal clubs, journal reading, and audio-digest tapes. Maximum of 150 credits per three-year period.

1 credit for each hour of general hospital staff meetings.

1 credit for each hour of preceptorship activities at a hospital or a medical school.

300 credits per triennium required.

#### **OBSTETRICS AND GYNECOLOGY REQUIREMENTS**

2 credits for each hour of attendance at national and regional medical organizations.

2 credits for each hour of attendance at Kentucky Obstetrical and Gynecologic Society.

2 credits for each hour of attendance at postgraduate courses in obstetrics and gynecology.

2 credits for each hour of attendance at hospital obstetrics and gynecological department conferences.

2 credits for each hour of attendance at medical school department conferences.

2 credits for each hour of attendance at journal clubs.

2 credits for each hour of making a formal presentation before a hospital medical staff.

10 credits for presenting or publishing a scientific paper.

1 credit for each hour of attendance at state medical association meetings.

1 credit for each hour of attendance at component medical society meetings.

1 credit for each hour of attendance at other local medical meetings.

1 credit for each hour of journal reading and audio-digest tapes.

1 credit for each hour of preceptorship activities at hospital and medical school.

1 credit for each hour of attendance at general hospital staff meetings.

300 credits per triennium period.

#### OPHTHALMOLOGY REQUIREMENTS

7 credits for each full day of attendance at an accepted meeting. The following meetings are considered acceptable:

Kentucky EENT Society

American Academy of Otolaryngology and  
Ophthalmology

American College of Surgeons

American Medical Association

Others

For each of the following staff meetings, the participants should receive 2 credits:

University of Kentucky and University of  
Louisville Medical School Ophthalmology  
Department

Others

Lectures, grand rounds, and special teaching sessions to interns and residents, one credit for each hour spent teaching. One credit should be given for each hospital staff meeting where a scientific program is presented. Journal club should be awarded one credit for each hour of participation.

Audio-digest tapes have become extremely valuable teaching aids. It was felt that 72 credits per three-year period should be awarded to those who listened to the program conscientiously.

Preparation of a lecture for a staff meeting, a special club such as the Lions Club, Rotary Club, etc., should award two credits per each presentation.

Other recognized postgraduate courses should be given the same amount of consideration as those which have been named (7 credits per day).

150 credits per triennium period required.

#### OTOLARYNGOLOGY REQUIREMENTS

Intensive courses, all day and evening—10 credits per day

American Academy of Ophthalmology and Otolaryngology, National Triological, Otolological, and other national meetings which run all day—8 credits per day.

American Medical Association, 8-hour day—8 credits per day.

Kentucky EENT Society meetings—? credits.

Local hospital staff meetings, 1 hour sessions—1 credit per hour. Includes sections on eye, ear, nose and throat, general staff meetings, tumor board, and

any other recognized departments of the staff.

Preparation for and taking of the American Board examinations in Otolaryngology—50 credits.

Preparation and/or presentation of a paper before an Otolaryngological Society, or publication of a paper in a recognized journal—10 credits.

Miscellaneous credits: tapes, accredited correspondence courses, local hospital and medical society meetings—1 credit for each. Maximum 75 miscellaneous credits per three-year period.

150 credits per triennium required.

#### PATHOLOGY REQUIREMENTS

Postgraduate seminars, workshops, slide seminars, meetings and other teaching sessions, whether local, regional or national. 2 credits for each hour of attendance.

Teaching medical students, workshops, etc., for physicians. 3 credits per hour.

Making presentation before a hospital medical staff. 2 credits per hour.

Teaching medical technologists, technicians, aides and other paramedical personnel. 2 credits per hour.

Preceptorship activities at a hospital or medical school. 1 credit per hour.

Published paper or paper read at a regional or national meeting—10 credits.

Paper read at a state or local meeting—3 credits.

Medical department conferences, medical school departmental conferences, journal clubs, tumor boards, etc. 1 credit for each hour of attendance.

300 credits per triennium required.

#### PEDIATRIC REQUIREMENTS

2 credits per hour of attendance at roundtables and seminars at the Annual Meeting of the American Academy of Pediatrics.

2 credits per each hour of attendance at postgraduate courses of the American Academy of Pediatrics or of medical schools on pediatric topics.

2 credits for each hour of attendance at postgraduate courses of other specialties of pediatrics.

2 credits for each hour of attendance at hospital pediatric staff meetings.

2 credits for each hour of attendance at preceptorship teaching of house officers, interns and students. Limit of 60 credits per three-year period.

10 credits for presentation of a paper at hospital medical/pediatric meeting.

1 credit for each hour of attendance at general or specialty sessions of the meetings of the:

American Academy of Pediatrics

American Pediatric Society

Association of Ambulatory Pediatric Services

International Congress of Pediatric

Society for Pediatric Research

1 credit for each hour of attendance at regional pediatric meetings.

1 credit for each hour of local pediatric society meetings.

1 credit for each hour of attendance at Committee meetings of the American Academy of Pediatrics and other national pediatric societies.



1 credit for each hour of attendance at general hospital staff meetings.

1 credit for each hour of self-instruction such as audio-digest tapes, and reading of reputable journals.

5 credits to be given for the taking of the American Academy of Pediatrics self-evaluation course.

10 credits for the publication of a scientific paper in a reputable journal.

300 credits per triennium period.

#### **PREVENTIVE MEDICINE REQUIREMENTS**

2 credits for each hour of attendance at American Public Health Association meetings.

2 credits for each hour of attendance at branch meetings.

2 credits for each hour of attendance at American Medical Association meetings.

2 credits for each hour of attendance at specialty scientific sessions of any specific specialty branch of medicine.

2 credits for each hour of attendance at the official Conference of Local Health Officers.

2 credits for each hour of attendance at postgraduate education courses.

2 credits for each hour of attendance at hospital department conferences.

Publication of a paper or article in a scientific journal, or presentation of a paper at county society level or higher. Limit 10 credits per publication or presentation.

2 credits for each hour of attendance at state medical association meetings.

2 credits for each hour of attendance at state society committee meetings.

2 credits for each hour of attendance at the Kentucky Association of Public Health Physicians meetings.

1 credit for each hour of attendance at meetings of voluntary health associations.

1 credit for each hour of attendance at hospital staff meeting.

1 credit for each hour of attendance at preceptorship meeting.

1 credit for each hour of attendance at journal clubs. Maximum of 60 credits per triennium required.

300 credits per triennium required.

#### **RADIOLOGY REQUIREMENTS**

1 credit for each hour of actual attendance at postgraduate radiology lectures.

1 credit for each hour of attendance at refresher courses.

1 credit for each meeting of Kentucky Chapter, American College of Radiology.

1 credit for attendance at each non-radiological meeting such as tumor clinics, mortality and morbidity conferences, journal clubs, state and county medical meetings, cancer conferences, etc.

1 credit for each hour of organized teaching, whether medical school, hospital staff, etc. Limit of 30 credits per three-year period.

Maximum of 25 credits for original paper or exhibit presented at county society or higher level.

150 credits per triennium required.

#### **SURGERY REQUIREMENTS**

2 credits for each hour of attendance at national and regional surgical meetings.

2 credits for each hour of attendance at postgraduate courses.

Participation in self-evaluation examinations (such as that given by the Academy of Orthopedic Surgeons). Maximum of 35 credits per exam. Maximum of 105 credits per three-year period.

2 credits for each hour of participation in clinical or laboratory research projects. Maximum of 105 credits per three-year period.

1 credit for each hour of attendance at local or state surgical meetings or surgical specialty meetings.

1 credit for each hour of attendance at local or state medical societies, etc.

1 credit for each hour of attendance at hospital surgical staff meetings, tumor conferences, CPC's.

1 credit for each hour of attendance at preceptorship activities at hospital or medical school.

1 credit for each hour of medical reading, audio-digest tapes, journal clubs. Maximum of 105 credits per three-year period.

5 credits for presentation or lecture before hospital staff, interns, or students.

5 credits for presentation before local or regional surgical meetings.

25 credits for publication of scientific papers.

25 credits for preparation of scientific exhibit.

300 credits per triennium required.

#### **Recommendations, Reference Committee No. 2**

The reference committee reviewed the Report of the Kentucky Foundation for Medical Care, portions of the report dealing with the report of the Continuing Medical Education Committee. Particular attention was focused on Appendix A and Sections A and B of Appendix B. The reference committee is aware that an immense amount of time and study was devoted to the preparation of this report and the reference committee expresses appreciation for the in-depth report which was presented. The reference committee wishes to express its approval of the principle of mandatory continued education of physicians but the committee believes the mechanics and format of Section B of Appendix B require further study before implementation. The committee, therefore, approves the report of the Continuing Medical Education Committee except Section B of Appendix B which the committee recommends be referred back to the Medical Education Committee for continued study.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

### **Report of the Advisory Committee to Blue Cross and Blue Shield Paragraph Relating to Emergency Rooms only**

During 1972, there had been considerable misunderstanding on the part of many consumers with re-

spect to the different methods of delivering services in hospital emergency rooms. The confusion arose in hospitals that had once staffed their emergency rooms with employed house physicians, and then changed and began contracting with private physicians to staff the emergency rooms. In these instances, the private physicians charged a fee for services. Currently, KMA, KHA, and Blue Cross and Blue Shield are developing public education material concerning the proper use of emergency rooms and the different types of arrangements in staffing them.

#### **Recommendations, Reference Committee No. 2**

The Report of the Advisory Committee to Blue Cross and Blue Shield, Paragraph 1 on Page 3 relating to Emergency Rooms was reviewed. The reference committee recommends that the appropriate Kentucky Medical Association insurance committee be informed to stimulate third party carriers to inform their insured of the nature of their insurance coverage, particularly in relation to emergency room procedures.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

### **Resolution K** **Fayette County Medical Society**

**BACKGROUND:** It is presumed that most physicians in Kentucky remain well informed regarding new medical knowledge. This is achieved through formal continuing education programs as well as through informal learning, reading, and encounters with other physicians in a variety of settings. Most agree the general lay public is usually unable to judge the qualities of a good physician. This same public is now requesting a demonstration by physicians of continuing clinical competence. This request is not satisfied by procedure of one time licensure. Some specialty societies and some state medical societies in the United States have established the precedent by requiring compliance with certain standards of continuing education for membership in good standing. Good physicians generally do not oppose this idea except for the nuisance of extra paper work. Legislatures, both state and national, are threatening the medical profession with third party operation of such systems. It would seem appropriate for these various reasons for the society of physicians at this time to voluntarily establish and demonstrate effective standards for this one aspect of quality control.

**RESOLVED,** that the House of Delegates of the Kentucky Medical Association, meeting September 19, 1973, instruct the Committee on Medical Education to prepare a plan of formal continuing education as a requirement for membership in good standing. This plan shall be presented to the 1974 House of Delegates for final consideration before implementation.

#### **Recommendations, Reference Committee No. 2**

The reference committee reviewed Resolution K. The reference committee wishes to express its ap-

proval of continued education of physicians but expresses the belief that the mechanics and implementation require further study. The reference committee, therefore, recommends that Resolution K not be adopted.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Mr. Speaker, I move the adoption of the report of Reference Committee No. 2 as a whole.

(Motion was seconded and carried.)

As Chairman of Reference Committee No. 2, I wish to express appreciation to the members of the Committee and KMA secretarial staff for their cooperation and help in consideration of the matters brought before this Committee.

#### **REFERENCE COMMITTEE NO. 2**

Earl P. Oliver, M.D., Scottsville, Chairman

Richard F. Hench, M.D., Lexington

Nelson B. Rue, M.D., Bowling Green

Paul J. Sides, M.D., Lancaster

Lloyd G. Yopp, M.D., Louisville

### **REFERENCE COMMITTEE NO. 3**

*Robert G. Overstreet, M.D., Louisville,*  
*Chairman*

Reference Committee No. 3 considered the following reports:

21. Report of the Committee on Occupational Health, Physical Medicine, and Rehabilitation

22. Report of the Maternal Mortality Study Committee

28. Report of the Committee on Legislative Activities

31. Report of the Committee on Environmental Quality

32. Report of the KMA Liaison on Cults to the AMA

41. Report of the Interspecialty Council

18. Report of the Emergency Medical Care Committee, Paragraph 4 on Page 1, relating to changes in the Medical Practice Act, only

### **Report of the Committee on Occupational Health, Physical Medicine And Rehabilitation**

The Committee on Occupational Health, Physical Medicine and Rehabilitation held two meetings during the Associational year. Initially, the Committee discussed plans to implement a program which would serve the needs of the private physician who had at least a part-time involvement in occupational medicine. In order to effectively plan such a program, a survey of the membership was conducted to determine the number of physicians who had an interest in a continuing education program on occupational health. The results indicated that a sizeable proportion of Kentucky physicians do provide health service to industries, and over 100 physicians indicated an



interest in a seminar, particularly relative to the recent Occupational Safety and Health Legislation.

On August 2, 1973, the Committee met in Frankfort with representatives of the Occupational Health Administration, Department of Labor, Industrial Medical Association and the continuing education departments of the University of Louisville and University of Kentucky to determine how best to serve the needs of Kentucky physicians during the coming year. Your Committee has developed basic concepts, established means of coordination between the various segments of the occupational health field and generated considerable interest which should translate into a viable program in 1974.

Charles E. Hornaday, M.D., Co-Chairman,  
Occupational Health

#### Recommendations, Reference Committee No. 3

The Report of the Committee on Occupational Health, Physical Medicine, and Rehabilitation was reviewed and accepted by the committee.

A motion was passed at a meeting of the above committee on August 2, 1973 stating:

Recommend that a seven-member committee to deal with Occupational Health be set up by the Board of Trustees of KMA. Four members of the committee would be taken from a list recommended by the KIMA Board of Directors to the Board of Trustees of KMA. These nominees would be members of the Kentucky Medical Association. The Committee on Physical Medicine and Rehabilitation would become a separate committee to deal only with matters regarding rehabilitation and the means to best accomplish this rehabilitation.

This motion was discussed by William F. Hawn, M.D., J. Bradford Block, M.D., and Eugene Kremer III, M.D., representing the Kentucky Industrial Medical Association, who recommended the inclusion of this motion to the report.

Mr. Speaker, I move the adoption of this report and recommend the above motion be brought to the attention of the Board of Trustees.

(Motion was seconded and carried.)

## Report of the Maternal Mortality Study Committee

The KMA Maternal Mortality Study Committee has met twice during the last Associational year. On September 29, 1972, the Committee reviewed 18 cases involving deaths associated with pregnancy, and 29 cases were reviewed at the April 27, 1973 meeting.

These cases were discussed in great detail, each meeting lasting two to three and a half hours. There was good representation on the Committee of obstetricians, family practitioners, and anesthesiologists. As in the past, cases were discussed anonymously and had occurred at least one year prior to the meeting in order to avoid any medical-legal involvement.

Cases that were particularly excellent examples for teaching were then selected by the Committee and

published one each month in *The Journal* with editorial comments intended for instructional purposes.

John W. Greene, Jr., M.D., Chairman

#### Recommendations, Reference Committee No. 3

The Report of the Maternal Mortality Study Committee was reviewed and discussed by this committee. The reference committee recommends that the following phrase from Line 6 of Paragraph 2 of the report be deleted as this is not legally applicable to the present law: "... in order to avoid any medical-legal involvement" and further, that this phrase be deleted from next year's committee report. We recommend the acceptance of this report as amended.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

## Report of the Committee on Legislative Activities

### National Affairs

The KMA Committee on Legislative Activities met four times during this Associational year, which included one meeting with representatives of the Legislative Committee of the Jefferson County Medical Society and representatives of the Woman's Auxiliary to KMA.

The 16th Annual KMA-sponsored Washington Congressional Trip was made on March 12 and 13, 1973, immediately following the AMA-AMPAC Public Affairs Workshop held on March 10 and 11. This year the location was changed from the Mayflower Hotel to The Washington Hilton. A briefing session was held the afternoon of March 12, and staff from the AMA Washington Office gave an excellent presentation on current and developing legislation. This was followed by a presentation on the status of PSRO by a representative of the Department of Health, Education and Welfare. Visits were made to all members of the Kentucky Congressional Delegation on Tuesday, March 13. The annual social dinner was attended by approximately 60, which included physicians and their wives, Congressmen, and their Administrative Assistants.

On April 18, 1973, representatives of the AMA Speakers Bureau on National Health Insurance presented to representatives of the KMA Board of Trustees, the KMA Committee on Legislative Activities, the KMA Public Relations Committee and the Woman's Auxiliary to KMA an excellent program on the important subject of National Health Insurance. The meeting, held at the KMA Headquarters Office, stressed the need for Kentucky physicians to be conversant on the AMA Mediredit Bill and knowledgeable on other National Health Insurance proposals.

The first session of the 93rd Congress convened the first week of January with a number of issues discussed in previous Congresses up for consideration. Mediredit was introduced on January 18 and has more sponsors than any other National Health Insurance proposal. The new bills (S. 444 and H.R.

2222, officially titled "The Health Care Insurance Act of 1973") have a number of new additions, to include dental care for children, emergency dental care for all ages and home health services. The KMA Board of Trustees, at its meeting on May 16, 1973, reaffirmed the support of Mediredit.

For a "Status of Selected Medical Legislation as of June 18, 1973," see Supplement A to this report. A "Status of National Health Insurance Legislation"

follows this report as Supplement B.

The Chairman expresses appreciation to the leadership of KMA for the opportunity to have served and wishes to express grateful appreciation to all the members of the Committee who have served diligently.

Hoyt D. Gardner, M.D.  
Chairman for National Affairs

## Supplement A

### STATUS OF SELECTED MEDICAL LEGISLATION

June 18, 1973

BILL NO.	DESCRIPTION	STATUS
H.R. 50 Roy	Establishes an Office of Rural Health Care in HEW to administer and coordinate rural health care programs.	Referred to Interstate and Foreign Commerce Committee
H.R. 1058 S. 423 Rogers/ Ribicoff	To create a cabinet level Department of Health.	Referred to Senate Labor and Public Welfare and House Interstate and Foreign Commerce Committee
H.R. 7447	Supplemental Appropriation for fiscal year 1973.	House Passed 5/10/73 Senate Passed 5/31/73
H.R. 7724 Rogers	<i>The National Biomedical Research Fellowship, Traineeship, and Training Act of 1973</i> : Establishes a program of health research fellowships through NIH.	House Passed 5/31/73
H.R. 7974 Roy	<i>Health Maintenance Organization Act of 1973</i> : Provides federal aid for development, establishment, and operation of HMO's.	Approved by House Subcommittee on Public Health and Environment
H.R. 8070 Brademas	<i>The Rehabilitation Act of 1973</i> : Extends authorization of grants to states for rehabilitation services.	House Passed 6/5/73
S. 14 Kennedy	<i>Health Maintenance Organization and Resources Development Act of 1973</i> : Provides \$805 million in federal aid for development, establishment, and operation of HMO's.	Senate Passed 5/15/73
S. 59 Cranston	<i>Veterans Medical Care Act of 1973</i> : Provides expansion of medical care to veterans; provides hospital and medical care to certain dependents and survivors; improves recruitment of career personnel.	Senate Passed 3/6/73; Hearings before House Veterans Affairs Committee
S. 504 (H.R. 6458) Cranston	<i>The Emergency Medical Services Systems Development Act of 1973</i> : Authorizes federal aid to emergency medical service systems.	Before Conference Committee
S. 607 Kennedy	To extend programs to eliminate hazards of childhood poisoning caused by lead based paints.	Senate Passed 5/9/73
S. 723 Beall	<i>The National Institute of Health Care Delivery Act</i> : Establishes institute for research and development regarding the organization and delivery of health care.	Senate Passed 5/15/73
S. 1115 Cook	<i>The Narcotic Addict Treatment Act of 1973</i> : Provides for registration of practitioners conducting narcotic maintenance programs.	Senate Passed 6/13/73
S. 1125 Hughes	<i>Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment, and Rehabilitation Act Amendments of 1973</i> : Calls for three-year extension of alcohol abuse control programs.	Reported by Committee on Labor and Public Welfare



S. 1136 Kennedy	<i>The Public Health Service Assistance Extension Act of 1973</i> : Authorizes a one-year extension of certain expiring PHS programs.	Senate Passed 6/5/73 House Passed 5/31/73
S. 1143 Humphrey	<i>The Social Security and Medicare Reform Act of 1973</i> : Eliminates Part B Medicare premium and modifies Medicare financing.	Referred to Committee on Finance
S. 1191 Mondale	<i>Child Abuse Prevention Act</i> : Establishes National Center on Child Abuse; assist prevention programs.	Hearings before Senate Subcommittee on Children and Youth
S. 1446 Javits	<i>The Medical Devices Safety Act</i> : Authorizes safety standards for medical devices and requires premarket testing in some cases.	Referred to Committee on Labor and Public Welfare
S. 1450 Javits	To extend authority for assistance to medical libraries.	Referred to Committee on Labor and Public Welfare

### Supplement B

#### STATUS OF NATIONAL HEALTH INSURANCE LEGISLATION June, 1973

The following health insurance bills have been introduced at this date. No hearings have been scheduled. The House Subcommittee on Public Health and Environment is expected to conduct hearings following the summer recess. Primary responsibility for NHI, however, remains with the Ways and Means Committee.

BILL NO.	DESCRIPTION
H.R. 1 Ullman	<i>National Health Care Services Reorganization and Financing Act</i> : Provides for establishment of new program of health care delivery through locally organized health care corporations; establishes program of health insurance coverage, with employers paying 75% of health insurance premiums; HEW would provide coverage for aged and indigent.
H.R. 22 S. 3 Griffiths/ Kennedy	<i>Health Security Act</i> : Provides for comprehensive health benefits for all U. S. citizens financed through an employer-employee payroll tax and from general revenue.
H.R. 33 Dingell	<i>The National Health Insurance Act</i> : Provides for a system of national health insurance financed through a payroll tax, and, for those not employed, through state and federal general revenues. The plan calls for comprehensive benefits and covers nearly all residents of the United States.
H.R. 2222 S. 444 Fulton/ Broyhill/ Hartke/ Hansen	<i>Health Care Insurance Act of 1973 (Medicredit)</i> : Provides comprehensive basic and catastrophic health insurance coverage financed through tax credits (or vouchers) with full federal payments for the poor, and for other assistance related to income.
S. 587 Beall	<i>National Catastrophic Illness Protection Act of 1973</i> : Authorizes national catastrophic illness insurance program administered by federal government through the states and existing insurance carriers.
S. 915 Javits	<i>National Health Insurance and Health Service Improvement Act</i> : Expands Part A and B Medicare benefits as a minimum standard for everyone.
S. 1100 H.R. 5200 McIntyre/ Burlison	<i>National Health Care Act of 1973</i> : Establishes a system of national health insurance implemented through existing health insurance systems. Benefits would be phased-in over a 10-year period, and a system of insurance pools would be used to provide benefits to poor, near poor, and previously uninsurable.
S. 1416 Long	<i>Catastrophic Health Insurance Plan</i> : Provides coverage after first 60 days of hospitalization or after first \$2,000 of medical expenses. Financed by .3 of 1% payroll tax on employers and employees. Program would be administered under Social Security System.

## State Affairs

The Committee on Legislative Activities meets less frequently in the year the Kentucky General Assembly is not in session. Most of this year's meetings placed the emphasis on national affairs.

Our staff has attended and has reported on meetings of the Interim Health and Welfare Committee and several other interim committees in Frankfort. Your Chairman met with representatives of the Kentucky Nurses Association and allied health groups to discuss proposed legislation.

In recent years the Association has been asked to comment on proposals of individual health groups for their particular service to be included in various health policies. A policy statement, adopted by the KMA Executive Committee, has been endorsed by the Legislative Committee for future use and is quoted below in part.

*That position, simply stated, is that the Kentucky Medical Association continues to cooperate with every private and/or governmental agency, health insurance carrier, comprehensive health planning organization and all others interested in good health care to try to do everything possible to assure the citizens of Kentucky wide-ranging, high-quality health services at the lowest possible cost.*

*How these services will be paid for is not a subject to which we normally address ourselves. It is, however, our feeling that any medical services provided to patients should be done under the direct supervision of a licensed medical doctor. We feel this is imperative whether the service is paid for by the patient, by a health insurance carrier or by a government medical program. It is our feeling that a broader range of health services can best be provided when the attending physician is in control of the entire patient treatment and can continuously offer his broad medical expertise.*

*The Kentucky Medical Association continues to be available to discuss with any interested group the many ways possible to provide high-quality, low-cost health care for all Kentuckians.*

This past spring, at the request of the KMA Board of Trustees, I have made a study of malpractice statutes. The Kentucky General Assembly has enacted a number of proposals on this subject in recent years. The Legislative Committee is acutely aware of the concern of the Association regarding malpractice legislation and is appreciative of the wisdom and understanding of the Board of Trustees in providing the Committee with broad instructions.

The Committee on Legislative Activities recommends that the House of Delegates continue the following policies: (1) All legislative proposals be coordinated by and channeled through the Legislative Committee. (2) Two staff men continue to work full time exclusively on legislative matters during the time the Kentucky General Assembly is in session, reporting directly to their immediate superiors. (3) The composition, authority, and function of the Quick Action Committee be retained. (4) The composition, priority, manner, and time of introduction of legislative proposals be left to the discretion of the

Committee on Legislative Activities. The above policies are not new; rather they are the ones under which we are currently operating. However, I feel they are extremely important and would be pleased to appear before any committee or group to further discuss them if desired.

We wish to make note of the fact that Mitchel B. Denham, M.D., has been elected, without opposition, as the State Representative for the 70th District, and that Nicholas Kafoglis, M.D., is a candidate for reelection in the 20th House District. Once again this Committee cannot emphasize frequently nor strongly enough the absolute necessity of physicians participating at the local level, not only in legislative affairs, but in primary and general elections as well. We urge all physicians to become interested in legislative matters and to stay abreast of legislative trends and effectively communicate their opinions to their respective Legislators. It is extremely important for all physicians to maintain rapport with their Legislators, and even more importantly, for the Key Men so assigned.

I wish to express appreciation to those members of the Committee on Legislative Activities, to the Quick Action Committee, the KMA Board of Trustees, and to the KMA House of Delegates for their continued support and understanding.

William W. Hall, M.D.  
Chairman for State Affairs

### Recommendations, Reference Committee No. 3

The Report of the Committee on Legislative Activities was reviewed and discussed with interest.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

## Report of the Committee on Environmental Quality

The Committee on Environmental Quality held one meeting during this Associational year on February 7, 1973.

That meeting concentrated primarily on a review of activities of the Kentucky Department for Natural Resources and Environmental Protection. Thomas O. Harris, Commissioner of the Department, attended the meeting and set forth some of the many goals which his Department had established in its reorganization plans. The Committee members talked at length about the various programs in which the Medical Association might take an active part. Since the time of the meeting the Committee has worked diligently to keep up-to-date on all hearings at the State level and continues to make every effort possible to have additional input into programs involving the environment in Kentucky.

The Committee forwarded to the Kentucky Water Pollution Control Commission resolutions passed by the Fayette County Medical Society and the Jefferson County Medical Society regarding the thoughts of those groups on stream classifications.



The Committee did make an effort, although belatedly, to attempt to get a physician appointed to the Environmental Quality Commission. However, we were not successful in our efforts on this matter.

I am hopeful that in the upcoming Associational year, the Committee will, by virtue of increased knowledge, be in a position to have considerably more input into all statewide activities involving the environment. We are at least, since being added to the State mailing list, getting more regular information than we have ever received in the past. The Committee stands ready at all times to counsel with county medical societies regarding specific problems that may arise in individual areas.

John E. Trevey, M.D., Chairman

#### Recommendations, Reference Committee No. 3

The Report of the Committee on Environmental Quality was reviewed and discussed.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

### Report of the KMA Liaison on Cults to the AMA

Beginning with the 1972-73 Associational year the former Cults Committee became known as the KMA Liaison on Cults to the AMA. The Committee met once during the Associational year on November 22, 1972, in Lexington, but has spent considerable time attempting to keep up-to-date on changes that are taking place around the country regarding chiropractors and other cults. In its new role, the Committee has received regular reports from AMA on activities at the national level and has attempted to stay as up-to-date as possible on how these activities affect Kentucky, particularly with the knowledge that 1974 will be a legislative year in the State.

In making a final report for this Associational year, we would urge that all members of the Kentucky Medical Association become aware of the fact that at the State legislative level and throughout the nation chiropractic activity has increased tremendously during 1973. There have been bills introduced which will include chiropractors under workmen's compensation, private health insurance policies and will lower the standards for licensing in many areas.

Since the admission of chiropractors under Medicare, there seems to be a vastly increased level of activity on the part of their group nationwide. It is our thinking that, without a concentrated effort on the part of this Association, we are likely to see great changes as a result of the 1974 Legislative Session. It is our belief, based on our continuing studies, that these changes would not be helpful to medical and health care programs of this Commonwealth. It is the intention of the Liaison Committee to keep close watch on all legislative changes throughout the country and do whatever is within our power to do in helping to maintain as high a standard as possible for all health care personnel who are licensed or certified in Kentucky.

The Committee stands ready to work closely with all groups within this Association and within the State who are interested in continually upgrading health care standards and avoiding the influx of any cult that would detract from these continuing efforts.

Richard F. Park, M.D.

Melvin Shein, M.D.

#### Recommendations, Reference Committee No. 3

The Report of the Committee on Cults was discussed and reviewed by the committee.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

### Report of the Interspecialty Council

Although the KMA Interspecialty Council has not had occasion to meet this year, we are pleased to report that four specialty groups are taking advantage of administrative services through the KMA Headquarters Office, and all indicate that they are highly satisfied with it. We urge all specialty societies to utilize the services of the Headquarters administrative staff and equipment, particularly with regard to such services as volume mailings, secretarial services, membership billing, and program planning.

There have been some informal discussions among the membership as to the feasibility of two or three specialty societies presenting joint scientific programs; and as chairman, I would recommend that this be pursued next year.

We are of the opinion that the Interspecialty Council has a good deal of potential for service to the individual specialty groups.

Ballard W. Cassady, M.D., Chairman

#### Recommendations, Reference Committee No. 3

The Report of the Interspecialty Council was reviewed and discussed with interest.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

### Report of the Emergency Medical Care Committee Paragraph Relating to Medical Practice Act only

In the area of emergency transportation, your committee feels that it is imperative for changes to be made in Kentucky's Medical Practice Act to allow emergency medical technicians and other adequately trained personnel to perform certain procedures on patients en route that they are currently prevented from doing. Your Chairman met with the KMA Board of Trustees on August 9 to discuss this matter and to make specific recommendations as to KMA's position during this year's Kentucky General Assembly.

#### Recommendations, Reference Committee No. 3

Paragraph 4 on Page 1 of the Report of the Emergency Medical Care Committee was reviewed and discussed with interest. We recommend this paragraph be referred to the Legislative Activities Committee for action.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion seconded and carried.)

Mr. Speaker, I move the adoption of the report of Reference Committee No. 3 as a whole.

(Motion was seconded and carried.)

Mr. Speaker, as Chairman, I wish to thank the members of this committee for their help in preparing this report and also a note of thanks to our secretary, Miss Connie O'Neil.

#### REFERENCE COMMITTEE NO. 3

Robert G. Overstreet, M.D., Louisville, Chairman  
Marilyn Sanders, M.D., Owensboro  
Raymond D. Wells, M.D., Inez  
James G. Wilhite, M.D., Lexington  
William R. Yates, M.D., Hebron

At this time, Doctor Greathouse introduced Carl Cooper, M.D., Chairman of the KEMPAC Board of Directors, who presented his annual report as follows:

Mr. Speaker, fellow delegates and guests—

On behalf of the Board of Directors of KEMPAC, I am pleased to give the oral report on its activities.

Candidate support committees formed for support of candidates in the May primary for the 1974 Kentucky General Assembly had a win record of 76%. Physicians, as treasurers of these committees, are to be complimented for the efficient record keeping involved due to the change in the Election Finance Laws in 1971. We realize this involves some problems to the committees and offer our help and guidance as we go into the general election campaigns at this time.

The *KEMPAC Topics* has been mailed to our membership on a regular basis and we are hopeful this has kept you informed of the current political activities of KEMPAC. District Directors have written letters to prospective KEMPAC members in each district as well as personal contact. The KEMPAC membership as of this time, is 1,150 with 27 sustaining members. We would like to remind you that family membership is \$35 and sustaining membership is those who have contributed \$100 or more—both payable on a calendar year basis.

There are several District Director appointments to be made to the KEMPAC Board of Directors this year due to the expiration of the six-year term and also the appointment of four representatives from the Woman's Auxiliary to KMA instead of three, making the political affiliation for both major parties absolutely even.

Tomorrow will be the last day of the KMA Annual Meeting this year, which also means the last

day that you will be able to visit with members of our KEMPAC Board at our booth. If you are not a member, stop by and join—bring along a friend. KEMPAC, as the political arm of our profession, needs your support with dollars and participation in political activity to try to elect the best people to represent our great Commonwealth of Kentucky.

We express our deep appreciation to you, the House of Delegates and to the KMA Board of Trustees for your moral and financial support.

In 1972, as in past years, the KMA House of Delegates reaffirmed its belief in the objectives of KEMPAC and AMPAC and recommended 100% participation by doctors and their wives. It further recommended reaffirmation of KMA policy that there be county society billing in order to encourage this participation, and recommended a vote of endorsement and encouragement of the KEMPAC organization to continue its worthwhile political efforts on the behalf of our free enterprise system and the freedom of the art and science of medicine.

In addition to this official explanation of your support, I would like for you to further demonstrate that you support the objectives and goals of KEMPAC by achieving 100% membership of the House of Delegates in KEMPAC. If you are not now a member, I urge you once again to visit our booth in the exhibit area and join.

As Chairman of KEMPAC, I request that you not only reaffirm this endorsement, but urge you to work at the grass roots level to make KEMPAC an effective political lever.

#### REFERENCE COMMITTEE NO. 4

*John M. Baird, M.D., Danville, Chairman*

Reference Committee No. 4 considered the following reports:

12. Report of the Kentucky Foundation for Medical Care, Inc. The portions of this report dealing with the Report of the Continuing Medical Education Committee, are referred to Reference Committee No. 2

14. Report of the Board of Directors, Kentucky Physicians Mutual, Inc.

19. Report of the Advisory Committee to Blue Cross and Blue Shield

Paragraph 1 on Page 3 relating to Emergency Rooms, is referred to Reference Committee No. 2

30. Report of the Committee on Community and Rural Health

33. Report of the Committee on Health Care of the Poor

34. Report of the Committee on School Health, Physical Education and Medical Aspects of Sports

36. Report of the Committee on Public Relations

5. Report of the Chairman, Board of Trustees, Paragraph 4 on Page 8 and the first full paragraph on Page 9, relating to Professional Standards Review Organizations, only

Resolution G — PSRO (McCracken County Medical Society)

Resolution I — PSRO (Campbell-Kenton Medical Society)



Resolution L — PSRO (Fayette County Medical Society)

Resolution N — PSRO (KMA Board of Trustees)

Resolution P — Use of Medical Assistants (Perry County Medical Society)

## **Report of the Kentucky Foundation for Medical Care**

### **President's Report**

The decade of the '60's with the initiation of widespread socialized medical and health services can correctly be termed the decade of Medicare. The decade of the '70's will probably be known as the decade of PSRO (Professional Standards Review Organizations). The law which contains the PSRO provision was enacted by the U.S. Congress in October, 1972, only a few weeks after I became President of the Foundation. Nearly all of my activities as President since that time have been involved in PSRO in some manner.

The Foundation's Board of Directors quickly took the position that the requirement for Professional Standards Review Organizations was in fact law and that the time of active opposition was past. A time of active involvement was necessary if PSRO were to be performed in a fashion acceptable to Kentucky physicians and equitable to our patients.

Every effort was made to keep informed of the latest developments with regard to PSRO and to keep the profession advised by regularly relaying information through Trustees and members of the Foundation Board. Each active committee was given a charge by the Executive Committee of the Foundation Board to accomplish preliminary studies on various facets of statewide review requirements within their respective areas of responsibility. These studies provided a basis for the development of a PSRO implementation plan.

At the same time we undertook to educate ourselves on comprehensive review systems established by other foundations for medical care, state medical associations, and others so that our own review mechanism could be best modified to meet any requirements that PSRO might dictate.

In January, I had the distinct honor of being named to the Task Force on Communications and Education of the AMA Advisory Committee on PSRO. The intent of the Advisory Committee is to provide information to the profession on PSRO and to offer advice and counsel to the government on PSRO and peer review related aspects.

With all available information, work was begun on a draft proposal for implementation of PSRO in the Commonwealth. This plan underwent many revisions in its formative stages. On the basis of the research done on PSRO, work on a PSRO implementation plan and the most recent interpretation of the intent of the Department of Health, Education, and Welfare in administering the program, recommendations were made to the KMA Board of Trustees and the Board of Directors of the Foundation on March 28 that approval be given to the Foundation's concept of a

single statewide PSRO in Kentucky. Approval was granted and a series of meetings were scheduled to disseminate information on this concept.

Meetings were arranged with representatives of medical and medically-related organizations as well as the membership, at Trustee District meetings, to discuss the PSRO plan and to determine the views of these respective groups with regard to PSRO.

After an evaluation had been made of opinions heard at these meetings, a final draft of the PSRO proposal was printed and sent to all KMA and KFMC Board members and to members of groups, associations, and agencies likely to be involved in PSRO.

On May 16, a special meeting was called of these individuals and comments were requested. Other than minor changes, the plan was well accepted and a final revision was printed. The only remaining thing to be done was to put the plan into operation, which was not possible without governmental approval. Steps were taken to bring the proposal to the attention of the Office of Professional Standards Review, the agency within DHEW charged with administering PSRO.

On May 23, the AMA called a special meeting on PSRO for those state medical associations wanting to effect single statewide PSRO's. At this meeting, state representatives spoke with members of their respective state's Congressional Delegation to make them aware of their feelings concerning statewide PSRO's so that this view would receive Congressional exposure. Kentucky appeared to be a leader among the other state associations in PSRO by having a written plan available. With the assistance of one of our Congressmen, a meeting was arranged with four of Kentucky's Representatives and the administrative assistants of both Senators over lunch to discuss the proposal. All seemed quite interested and were anxious to receive individual copies of the plan.

The KMA-KFMC Delegation was fortunate in meeting with William I. Bauer, M. D., Director of the Office of Professional Standards Review, and to present him, also, with a copy of the PSRO plan.

A great deal of thanks is due to all those who worked so long and so hard in helping to develop the PSRO plan. The government may decide to arbitrarily impose an alien administration on the profession to effect PSRO, but I feel we can be well satisfied with our efforts.

The year has certainly been a rewarding one for me, and I would like to thank each member of the Board of Directors, each Committee Chairman, and each Committee member for their support and personal efforts this year.

David A. Hull, M.D., President

### **Board of Directors Report**

Physicians as individuals and in association have traditionally been involved in many areas of endeavor not directly related to the practice of medicine. More and more there are very few subjects we encounter in our day to day lives that do not have some impact on our profession. The Foundation was

created to confront such "day to day" matters in the social and economic spheres.

This year, a topic of great concern, obviously, was the enactment of Public Law 92-603 requiring Professional Standards Review Organizations. The Board of Directors has worked diligently, and, I feel, with much effect, to see that PSRO operates fairly and reasonably. The fruit of our efforts has yet to be seen but a sound effort is being made on behalf of Kentucky medicine.

Not all our time was spent on PSRO. The Executive Committee met twice during the year and the full Board of Directors met four times in addition to two meetings held conjointly with the KMA Board of Trustees.

During the first meeting of the Board, the following officers were elected: David A. Hull, Md., president; W. Neville Caudill, M.D., Vice President; Paul J. Parks, M.D., Treasurer; and Robert G. Cox, Secretary. The Executive Committee this year was composed of the officers and the Chairman of the KMA Board of Trustees, Robert N. McLeod, Jr., M.D. A Bylaws Committee was newly formed to evaluate possible changes and Foundation Committee members and chairmen were selected.

Peer review continued to be a major area for Foundation action. Early in the year, county medical society secretaries were contacted and advised of the September House of Delegates action which stressed the importance of peer review in settling questions with insurance carriers. Some county societies and all Trustee District review committees were advised that the Claims and Utilization Review Committee of the Foundation would act as the administrative head of the mechanism.

Initial publication of "norms for care" was made and the book was distributed to all component review committees and hospitals in the state. Pocket size versions were printed to be furnished to all Kentucky physicians.

The PSRO requirement was made into law in October and the Executive Committee began immediate consideration of the effect of this law in medical practice in our state and the most logical role the Foundation should assume. Each committee of the Foundation was given a PSRO topic area related to their normal functions to study in addition to routine activities. Information developed by the committees helped to provide the base on which the Foundation PSRO implementation plan for Kentucky rested.

The Board accepted a report by the Continuing Medical Education Committee to research the possibility of setting up a statewide continuing education program. Subcommittees were appointed to consider separate aspects of the program and the results of their studies are addressed in the final report of that committee.

The Health Manpower and Placement Services Committee had been charged by the Executive Committee to collect information on training and certifying allied health personnel. In addition to this work, the Committee recommended endorsement of the Military Experience Directed Into Health Careers Program and confirmation of support of Health Ca-

reers In Kentucky, both of which the Board approved.

Continued efforts by the Health Care Delivery Committee in evaluating the effectiveness of alternate methods of care were noted and encouraged by the Foundation Board and the work of the Health Insurance Standards Committee in developing guidelines for minimum coverage was approved.

A request was made to the editors of the KMA *Journal* for the Foundation to be allotted regular monthly page so that the membership could be kept informed of Foundation activities, and this request was granted.

Correspondence was directed to each member of the Kentucky Congressional Delegation seeking support for the Foundation concept of state autonomy in designating PSRO areas and replies received were encouraging.

At its meeting on March 28, the Board formally went on record as favoring a single statewide PSRO to be administered by a separate or sub-organization of the Foundation. Alternatives to the statewide plan were discussed but all were rejected in favor of the single PSRO theory. A PSRO implementation plan was drafted and later approved by both the KMA Board of Trustees and the Foundation Board.

Chairmen of Trustee District Peer Review Committees were appointed as ex-officio members of the state Claims and Utilization Review Committee so input from local groups into policy making, and vital communication could be maintained.

Amendments were suggested to the Bylaws by the Bylaws Committee and accepted. Revised Bylaws were subsequently drafted and approved.

Final committee reports were heard at the last regular meeting of the Board. All were approved as submitted with the exception of the report of the Continuing Medical Education Committee. The Board voted that this report be accepted except for Section B of Appendix B titled "Continuing Education Requirements for Kentucky Physicians" which was rejected. In addition, the Board voted to amend the first RESOLVED in Section A of Appendix B titled "A KMA Accreditation System for Continuing Medical Education Centers in Kentucky" to read "RESOLVED, that the KMA consider establishing . . ." (This is a joint committee of both KMA and KFMC. The Board of Trustees of KMA voted to accept the report as written except for Section B which should be referred back to the Medical Education Committee for continued study.)

I would like to express my personal appreciation to each Director in this report on behalf of myself and the profession, and am sure that the membership joins me in thanking them for their work and interest.

David A. Hull, M.D., President

#### Claims and Utilization Review Committee

Peer review activities were a focal point for Foundation endeavors this Associational year. The progression of routine review functions increased markedly over past years and the enactment of Professional Standards Review Organization requirements created an added responsibility for the Committee.



By observing trends in PSRO interpretation and maintaining a perspective of on-going non-PSRO review responsibility, the state Committee developed a timetable for accomplishment of review objectives which would enhance the effectiveness of the present mechanism and help to educate the profession and provide information on PSRO.

This year, the greatest volume of review was performed by Trustee District and County Medical Society Peer Review Committees, but the role of the state Committee was not diminished. Administrative duties for the review mechanism and consideration of precedent cases formed the core of the Committee's normal activities. A number of claims were reviewed on an appellate basis, and situations restricted to quality care appraisal were considered.

In-hospital treatment criteria for often encountered diagnoses from a claims payment standpoint was submitted to component review committees. This material contained average lengths of hospital confinement, average dollar costs per treatment, and common reasons for claims rejections. Review Committees also received copies of the California Relative Value Studies as a review aid.

Up to this point, the review mechanism had been managed by the state Committee with supervision by the Foundation's Board of Directors. Because most review is done at the District or local level, a need for input from regional sources was seen as critical. For this reason, Chairmen of Trustee District Peer Review Committees were appointed, along with members of the state Committee, to serve as a primary policy-making body for review procedures.

In an effort to standardize state Committee procedures and claims processing, a set of operational guidelines were developed, discussed, and approved by the Committee but will be modified as changing needs are identified.

I would like to thank the Chairmen and members of all the Trustee District Peer Review Committees as well as the members of the Claims and Utilization Review Committee for all their work and effort, and feel they deserve a great deal of recognition for all their endeavors on behalf of the profession.

W. Neville Caudill, M.D. Chairman

### Bylaws Committee

The Bylaws Committee, which was newly formed at the beginning of the year, found it necessary to meet only once. A number of suggested Bylaws changes were considered which had been indicated by operational experience. Changes were discussed and subsequent revisions were suggested to the Board of Directors which approved the following amendments.

The word "Trustee" was formally changed to "Director" when indicating a member of the Foundation's governing body. This amendment was suggested to avoid confusion between the Foundation Board and the KMA Board of Trustees.

Bylaws provision for an initial or reorganizational meeting of the Board of Directors was felt necessary

because of the lapse of time between the date that the new members of the Board are named and the date of the first yearly meeting of the Board. This time lapse may be as long as two months thereby allowing only ten months of active Foundation operations. The Bylaws were so amended with the annual meeting of the Board being set as the third Thursday in October.

A new paragraph was added to the Bylaws which provides for a Nominating Committee to be appointed by the President. This committee is to suggest nominees to the KMA Board of Trustees for positions of Directors of the Foundation Board whose terms have expired. It will also offer nominations to the Board of Directors for new officers.

The original Bylaws provided for an Executive Committee to be composed of from three to five members. It was felt that the composition of the Executive Committee should be more specifically stated so the Bylaws were amended to reflect that the Committee would be made up of the President and four members of the Board.

The Bylaws Committee noted that there were other matters that might arise periodically which should become routine policy but not necessarily require Bylaws amendment. Two policy matters were adopted. The first was that the Immediate Past President would be retained as an advisor to the Board whether or not his Board tenure terminated after his year as President. The second policy matter adopted was that the Nominating Committee shall send a newsletter to all Board members at least two weeks prior to the October meeting advising of current committee chairmen and members and its recommendations, if any, for committee positions for the coming year.

Amended Articles of Incorporation and revised Bylaws were drafted, approved by the Board of Directors on March 28, 1973, and filed with the Secretary of State and the Jefferson County Clerk as required by Kentucky law.

Walter I. Hume, Jr. M.D., Chairman

### Health Care Delivery Committee

In the course of seeking information on alternate methods of health care delivery, this committee determined that our studies would have to be confined in order to obtain reasonable and comprehensible data. We decided to focus, therefore, on out-patient care, at least at first. In order to keep abreast of alternate methods being demonstrated and their effectiveness regarding patient care, information was requested from five health care organizations considered to be representative of the various group modes of delivery.

Four groups responded with statistics on out-patient care which the Committee attempted to compare. These four groups were the Kentucky Medical Assistance Program; Kentucky Blue Cross-Blue Shield; the Trover Clinic, Madisonville; and the Park-DuValle Neighborhood Health Center, Louisville. Each source was asked to supply the number of persons enrolled in their respective programs, the number of out-patient visits recorded annually, the average number

of visits, the total dollar cost for physicians' fees for the program, and the average dollar cost for physicians' fees per visit. These categories were felt to be basic enough to provide an indication of program effectiveness without requiring expert analytic capabilities for interpretation.

While interesting, the information received was not specific enough to allow relative evaluation. Additionally, the limited number of respondents was not felt to be sufficient for any objective conclusions.

The Committee then contacted five other health care organizations in the state and three outside the state, including the federal government, and asked for more specific data. The results indicated that because of the large variation in health care program benefits and populations served, no true comparisons could be projected.

It was then determined that standardized comparison categories must be developed before objective deductions could be made. Tentative conclusions, however, were that at this point in Committee evaluations, fee-for-service care seemed to be the most economical, and paid-in-full private health insurance may be an effective alternate method of care delivery if intense and effective review is imposed.

Although not directly related to Professional Standards Review Organization functions, this Committee's experience may be helpful in review of PSRO administration.

Walter I. Hume, Jr., M.D., Chairman

#### Health Insurance Standards Committee

The Health Insurance Standards Committee met at 2:30 p.m. on Thursday, July 19, 1973, at the KMA Headquarters Office in Louisville. Members present were Richard F. Grise, M.D., Bowling Green, Chairman; Lewis Dickinson, M.D., Glasgow; and Nicholas Kavanaugh, Jr., M.D., Lexington. Members absent were Robert M. Blake, M.D., Maysville; and Garnett J. Sweeney, M.D., Liberty.

A review of the 1972 annual report of the Committee and of the meeting of the Committee on March 22, 1973, was made.

A discussion was held concerning the expression of cooperation by the Kentucky Commissioner of Insurance, Harold B. McGuffey, and the Blue Cross-Blue Shield organizations.

Information received from the Department of Insurance of the State of California detailed the procedures followed in the adoption of rules and regulations by the California Insurance Commissioner relating to establishing certain standards of minimum benefits for insurance policies. Documents outlining the appropriate portions of the California Insurance Code were summarized.

It was recalled that previous decisions of this Committee were that it should not likely recommend, in specific terms, a standard insurance policy, but certain minimum benefits of hospital and out-patient expenses and medical and surgical coverages as well as provisions for cancellation clauses, options for catastrophic care and nervous and mental disorders, and specific exclusions. In general, it was to be em-

phasized that a policy must be of real economic value to the insured, recognizing the rights of the insurers to exercise sound underwriting judgment and delineating what portions of expenses to the patient might be covered. Discussion as to instructions in policies on patient age, armed forces services, workmen's compensation, self-inflicted injuries, and other frequently listed limitations was made to indicate something of the scope of limitations and reductions in policy that might be necessary.

It was decided that further effective recommendations from this Committee would have to be based on consideration of specific problems. Each member of the Committee was requested to prepare from his own experience, from consultation with other physicians and associates, and from literature obtained through various sources, a listing of priority problems to be solved. A copy of the information received from California is to be distributed to each Committee member as an additional aid in formulation of his individual recommendations. It was further suggested that a representative of Blue Cross-Blue Shield and of the Health Insurance Council be asked to prepare a similar listing.

These are to be presented in writing to the Chairman of the Committee through the KMA Headquarters Office no later than October 1, 1973. These recommendations would then be considered at the next meeting of the Committee tentatively set for October 25, 1973, at the KMA Headquarters. Representatives of Blue Cross-Blue Shield and the Health Insurance Council are to be invited to participate in person at this time.

A copy of these minutes will be sent to each member of the Committee, and are to be used as a request for carrying out the recommendations of the Committee at this meeting. A copy of these minutes should further be used as the annual, incomplete, report of this Committee to the Board of Directors of the Foundation and the KMA House of Delegates.

Richard F. Grise, M.D., Chairman

#### Health Manpower and Placement Services

The Health Manpower and Placement Services Committee of the Kentucky Foundation for Medical Care continued its regular activities during the current year. These included the review and recommendations for endorsement of several new curricula in Allied Health Education.

One of its major accomplishments has been the preparation of a reference document which describes the Accreditation, Certification, and Licensure procedures followed by the Allied Health Professions in the 50 different states. Included also was a current list of Allied Health Programs being offered in Kentucky by both the junior and senior colleges.

One of the changes, i.e., to determine the existing Allied Health Manpower pool in Kentucky, has proved to be a much more difficult assignment. The Committee will concentrate its efforts in the next year toward developing a strategy and perhaps a methodology for providing the foundation with these essential data.

Joseph Hamburg, M.D., Chairman



#### Recommendations, Reference Committee No. 4

The Report of the Kentucky Foundation for Medical Care was reviewed for informational purposes. Two committees of the Foundation are also KMA committees. The Committee on Continuing Medical Education report was referred to Reference Committee No. 2. The Committee on Health Manpower and Placement Services was reviewed and adoption is recommended.

The committee recognizes the tremendous amount of work involved in the preparation of this report and would like to take this opportunity to personally thank those members whose efforts are very obvious. In particular, the committee wishes to commend the effort of Doctor David Hull for his extensive work with the Kentucky Foundation for Medical Care and its committees.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

### Report of the Board of Directors, Kentucky Physicians Mutual, Inc.

As Chairman of the Board of Kentucky Physicians Mutual, Inc. (Blue Shield of Kentucky), it is a pleasure for me to present a report of our positive accomplishments for the past year. The challenges to health care providers and to Blue Shield and the voluntary system continue. Priority issues are health care cost and its constant increase, governmental involvement, public concern and press coverage.

The impact of the President's Economic Stabilization Order has had an effect on all of us. In spite of that impact, in 1972, over 1,190 additional companies voluntarily enrolled their employees and dependents in Blue Shield of Kentucky, making a total of 13,328 member groups. This produced one of our biggest years with a membership growth of 6.47%; membership in Kentucky Blue Shield basic benefits reached 1,229,269. In 1972, Blue Shield of Kentucky paid in excess of \$23,000,000 for services rendered to its members bringing the total payment to doctors, since the organization of Blue Shield of Kentucky in 1949, to over \$182,000,000.

Over 700,000 members carry additional benefits through Major Medical and Extended Benefits to help pay the cost of long-term catastrophic illness, and some 68,000 people are protected by Blue Cross and Blue Shield Medicare Supplemental Program. The Prescription Drug Program now has almost 30,000 members; and during last year, over \$374,000 was paid in prescription benefits.

Companies and unions are now bargaining tougher over health care benefits than ever before. Employees are meeting increasing resistance from employers concerning payment for health programs. Business organizations such as the U.S. Chamber of Commerce, as well as insurance commissioners, congressional and legislative committees, labor and consumer organizations are now taking critical looks at the total health care picture as is government. The major issue is cost. Rates for health carriers including Blue Shield are more tightly controlled under Phase

IV than previously and maintaining financial stability will become more difficult.

The Blue Shield Plan maintained its financial stability and continues to have one of the lowest percentages of operating expenses of Blue Shield Plans of our size across the nation. We have \$10.90 reserve per member.

The physician staff of Blue Shield has also undergone recent change. Doctor J. Duffy Hancock retired as Medical Director on August 1, 1973, after many years of dedicated service to the voluntary health care movement. Doctor Henry B. Asman was promoted to the position of Director of Medical Services effective August 1, 1973; and on July 1, 1973, Doctor Frank B. Radmacher, a specialist in Internal Medicine, became the Medical Consultant.

One of the priority issues in the area of benefits is the effort being made to upgrade existing lower benefit programs. Areas of new benefit development are: revision and wider marketing of diagnostic outpatient coverage; expansion of Major Medical Certificates to maximums of \$250,000; and consideration to lowering eligible employer groups from a minimum of five employees to a minimum of three employees.

The Blue Shield Board has directed the marketing of the Usual, Customary and Reasonable Program statewide and the development and use of individual physician fee profiles in administering the program. Blue Shield of Kentucky, as a system, has elected to move in the direction of a Usual, Customary and Reasonable type program rather than development of higher indemnity schedules. The success of a Usual, Customary and Reasonable Program is closely aligned to an effective peer review system, and acceptance by the medical profession.

We now have over 200,000 Kentuckians covered by Usual, Customary and Reasonable Programs. Physician participation continues to increase with over 77% of Kentucky physicians participating. In 1972, 162,000 Usual, Customary and Reasonable claims were processed representing payments for professional services in excess of \$7 million. Of these claims, only 2,664 required special handling and 2,422 of them were processed either by additional information or reconsideration of the submitted fee. Only 225 cases (or less than 2/10 of 1% of all cases processed) required review by peer review committees.

The Consumer Advisory Committee to Blue Shield continues to express concern over health care costs, the constant increase and the delivery of care. Your Board of Directors of Kentucky Blue Shield is equally concerned and a number of programs are being implemented to help contain costs while maintaining quality care.

The Utilization Review Program has been developed to establish norms and patterns of health care in Kentucky. Using data gathered from inpatient hospital cases, the computerized program maintains statistical information from which routine, special and exception reports are generated. Using these reports, an educational approach is being taken with providers of care. Provider response has been excellent and several hospital Utilization Review Committees have requested additional reports and special studies.

With the passage of HR-1 (PL 92-603), Congress mandated the development of local review organizations to be called Professional Standards Review Organizations. Blue Shield of Kentucky has been working closely with the Kentucky Medical Association and local societies to develop a relationship with the PSRO activities and structures that we hope would eventually extend the review activities beyond Medicare and Medicaid to include all hospital cases. We see a very viable role in working with the developments in such areas as providing statistical information for developing standards for medical care, parameters for case review, communications and education with the review committees and provider segment. We recognize the necessity of working with and helping make successful any Professional Standards Review Organization approach that is developed because of our responsibility to our subscribers and the dollars they have entrusted with Blue Shield of Kentucky.

Professional Standards Review Organization legislation emphasized more than ever before the need for data gathering and reporting programs such as the Kentucky Utilization Program (KUP). There are now 37 hospitals participating in the KUP Program and we expect the number of participating hospitals to increase with the legislated need for such information.

It remains the objective of Kentucky Blue Shield when working with consumer groups, management and labor, the Kentucky Medical Association, the Kentucky Hospital Association, county medical societies and other groups to experiment with various methods of health care delivery to bring more and better care to the people of Kentucky at a cost they can afford. To meet this objective, the Board of Directors of Kentucky Physicians Mutual, Inc., has recently directed Blue Shield of Kentucky to provide a leadership role by assuming direct responsibility for the development of experimental health care delivery systems for our members and the people of Kentucky. This could result in our actual development, implementation and administration of an alternate delivery program; however, any involvement would be in keeping with our policy to maintain the philosophies of Blue Shield of Kentucky.

Changes have been made in the administration of the Pre-Admission Testing Program. The program has been liberalized in the areas of postponed and cancelled admissions. We expect the change to increase the use of the program by physicians and also the number of participating hospitals. To date, 31 hospitals have signed agreements to participate in the Pre-Admission Testing Program.

In April, a joint Kentucky Medical Association and Blue Shield of Kentucky Leadership Conference was held. Included were representatives from county medical societies, the Kentucky Medical Association Board of Trustees, the Kentucky Medical Association Inter-Specialty Council, the Blue Shield Board of Directors and Kentucky Medical Association and Blue Shield of Kentucky Staff. This continuation of cooperation between medicine and Blue Shield of Kentucky increases the communication and understanding among the leadership of the medical profession and Blue Shield of Kentucky. Indications are that

meetings of this type should be continued.

The voluntary prepayment system is strong, vital, growing and must work. There are many dedicated people in and out of medicine who voluntarily give of their time to make it work. We are extremely grateful to them. As Chairman of the Board and speaking for the Board, we know our objectives are in the best interest of the people, the medical profession, and our voluntary system. While we thank the entire medical profession of Kentucky and the staff of the Kentucky Medical Association for their cooperation and contribution in the past year, we know that the coming year, its successes and failures, will be largely dictated by how we as members of our free society respond to the opportunities and challenges facing the voluntary system.

George W. Pedigo, M.D., Chairman

#### Recommendations, Reference Committee No. 4

The committee reviewed the Report of the Board of Directors, Kentucky Physicians Mutual, Inc., and it was pointed out in this report that Blue Shield has directed the marketing of the Usual, Customary and Reasonable program statewide and the development and use of individual physician fee profiles in administering the program.

The committee wishes to bring to the attention of the House of Delegates the section of the report beginning on Page 4, Paragraph 2, which reads as follows:

"It remains the objective of Kentucky Blue Shield when working with consumer groups, management and labor, the Kentucky Medical Association, the Kentucky Hospital Association, County Medical Societies and other groups to experiment with various methods of health care delivery to bring more and better care to the people of Kentucky at a cost they can afford. To meet this objective, the Board of Directors of Kentucky Physicians Mutual, Inc., has recently directed Blue Shield of Kentucky to provide a leadership role by assuming direct responsibility for the development of experimental health care delivery systems for our members and the people of Kentucky. This could result in our actual development, implementation and administration of an alternate delivery program; however, any involvement, would be in keeping with our policy to maintain the philosophies of Blue Shield of Kentucky."

Mr. Chairman, this report is submitted for information.

### Report of the Advisory Committee to Blue Cross and Blue Shield

The KMA Advisory Committee to Blue Cross and Blue Shield met at the KMA office on May 24, 1973. In previous years, there had been two Advisory Committees; one to Blue Cross and another to Blue Shield, and they were combined into one committee this year as recommended by the 1972 House of Delegates.

The purpose of the committee is "to monitor the operation of Kentucky Blue Cross and Blue Shield



with the objective of striving to furnish for the public the most advantageous coverage possible for the premium dues paid, avoiding abuses of Blue Cross and Blue Shield to include studying and correcting trends before they develop into abuses and continuing to keep Kentucky physicians informed, interested and with a voice into operation of Blue Cross and Blue Shield."

We were pleased to have two members of the Blue Shield staff in attendance who presented several informative reports. The following summary of these reports reflects continued activity and leadership provided by Kentucky Blue Cross and Blue Shield.

**Enrollment:** Staff reported that despite the impact of Phase II regulations, 1972 was the best year in Blue Cross and Blue Shield history for membership growth. Your Advisory Committee heard reports indicating that a great deal of effort is being placed on upgrading existing lower benefit programs to more realistic coverage. There are specific plans to eliminate the vast majority of existing Standard Blue Cross and Blue Shield certificates during 1973, and discussions are being held with the Department of Insurance concerning the possibility of automatically upgrading them. There is a continuing desire on the part of the public for higher levels of Blue Shield benefits. The current trend is toward wider marketing of Usual, Customary and Reasonable contracts rather than developing and marketing higher benefit indemnity programs.

Some areas of new benefit developments under consideration are:

1. Revision and wider marketing of diagnostic outpatient coverage.
2. Development of a home health care benefit.
3. Expansion of Major Medical certificates to maximums of \$250,000 or \$500,000.

Staff also reported that the Delta Dental Plan is growing, with several groups already enrolled and many more anticipated in the near future.

**Professional Relations:** During 1972, the Professional Relations staff contacted over 6,800 physicians' offices, personally contacting the physician on over 2,300 of these calls. In addition, staff made 1,914 hospital calls, 313 contacts with Skilled Nursing Facilities, 108 calls on Home Health Agencies, over 300 calls on dental offices and completed 160 Utilization Review surveys for Part A Medicare. In order to build a better understanding with physicians and their office personnel, staff conducted 16 Blue Shield seminars for physicians' office assistants during the fall of 1972, with over 1,200 people in attendance.

**Claims:** During 1972, Blue Cross and Blue Shield processed a record total of 1,080,468 claims. Blue Cross processed 322,370 claims representing payment of over \$73 million, and Blue Shield processed 758,098 claims with payments exceeding \$23 million.

**UCR Program:** Reports indicate that the Usual, Customary and Reasonable Program continues to operate smoothly and successfully. During 1972, over 162,000 claims were processed under the Program, representing payments for professional services in excess of \$7 million. It was necessary to refer only

225 cases to peer review which represents less than .2 of 1% of all the cases processed. Physician participation in the Program continues to increase, with 63 counties having participation in excess of 85%. Currently 2,303 Kentucky physicians participate. In order to improve the effectiveness of the Program, Kentucky Blue Shield is working toward the development and implementation of individual physician fee profiles which will more closely identify each physician's individual charging patterns. Payment procedures for UCR processing were discussed at great length and the Committee reaffirmed their endorsement of the guidelines and payment procedures.

**Certificate Limitations and Exclusions.** All Blue Cross and Blue Shield certificates contain some limitations and exclusions. Over the years, many questions have arisen concerning these limitations and exclusions and at the recommendation of previous Advisory Committees, Blue Cross and Blue Shield staff prepared and distributed to all physicians during 1972 a booklet titled, "A Guide to Kentucky Blue Cross Limitations and Exclusions."

**Alternate Delivery Systems.** With the continued activity throughout Kentucky with regard to Prepaid Group Practices, HMOs, and Foundations for Medical Care, Kentucky Blue Cross and Blue Shield has established priorities for involvement. The highest priority has been the association with foundation developments initiated by the Kentucky Medical Association and the Jefferson County Medical Society. It remains the objective of Kentucky Blue Cross and Blue Shield to experiment with various methods of health care delivery when working with consumer groups, management and labor, the Kentucky Medical Association, the Kentucky Hospital Association, and county medical societies.

**Utilization Review:** Based on data from all inpatient Blue Cross cases, a computerized program has been developed which identifies norms, or patterns, of care. Length of stay and ancillary services parameters have been developed for every major disease category and reports can now be generated for every hospital. Current plans are to begin sending these reports to each hospital as an educational tool to be used by the medical staff and/or Utilization Review Committee. Blue Cross and Blue Shield staff will be available to explain these reports to all medical staffs.

**Kentucky Utilization Program:** It was reported that the data gathering and reporting service, KUP, had been expanded to over 30 hospitals. The program is designed to provide statistics that would be beneficial to all Utilization Review Committees.

**Pre-Admission Testing:** The 1972 Advisory Committee to Blue Shield recommended that the Pre-Admission Testing Program (PAT) be liberalized to cover tests done outside the hospital, providing the outside laboratories meet certain requirements. This recommendation presented a legal problem since Blue Cross contracts directly with hospitals, and it would be virtually impossible to contract with each qualified laboratory. PAT has been liberalized, however, in the areas of cancelled and postponed admissions

which should enhance the effectiveness of the Program.

**KMA-Blue Shield Leadership Conference:** A status report was given on the Leadership Conference sponsored jointly by KMA and Blue Shield. The Conference was held on April 19, 1973, in Louisville and highlighted local and national speakers discussing current and future health care and prepayment trends and problems. The meeting was very successful with over 85 people in attendance.

**Other Points Discussed:** A question was raised about the status of a program to keep physicians advised of hospital charges for their patients. It was reported that KMA's Hospital Committee is currently working with KHA on this program. The Committee recommended that Blue Cross and Blue Shield continue to keep physicians fully aware of the status of all claims submitted whether they be paid, rejected, or referred to committee for review.

This committee, in its role of maintaining a friendly and close liaison with Blue Cross-Blue Shield, hopes to continue to reflect the policies of this Association and to provide assistance in the upgrading of Blue Cross-Blue Shield coverage for our citizens.

Kenneth P. Crawford, M.D., Chairman

#### **Recommendations, Reference Committee No. 4**

The Report of the Advisory Committee to Blue Cross and Blue Shield was reviewed with the exception of Paragraph 1 on Page 3 relating to emergency rooms. This section was referred to Reference Committee No. 2.

The committee studied the report and wishes to thank the committee for continuing its responsibility in the area of liaison between KMA and Blue Cross and Blue Shield.

Mr. Chairman, I move the adoption of this section of the report.

(Motion was seconded and carried.)

## **Report of the Committee on Community and Rural Health**

The Committee on Community and Rural Health met twice this year and carefully studied its duties as outlined by the KMA House of Delegates. The committee felt that the delivery of health care, both in urban and rural areas, is undergoing rapid change and were of the strong opinion that some body within KMA should serve in an advisory capacity to help communities with that change.

For that reason, we requested and received approval for several changes in our responsibilities which we feel will make the committee more responsive to the Association.

The committee is investigating the potential of increasing liaison with the two medical schools in developing seminars on community medicine, directed toward physicians involved with Comprehensive Health Planning, health department boards, county societies, and mental health boards in an effort to acquaint them with new techniques for evaluating and solving community problems.

In undertaking this role, the committee felt it

would be beneficial to poll the county society secretaries in the Commonwealth to determine what their greatest health problems were and to ask them to advise KMA what its role might be in helping coordinate possible solutions or alternatives to these problems. This survey was carried out in the spring of this year with excellent results. The overwhelming majority of those responding stated that their most serious problems were physician manpower shortage and/or distribution, lack of allied health personnel, and shortage of health facilities.

We are of the opinion that health manpower is the responsibility not only of medicine, but of the state as a whole, and its distribution is influenced by many circumstances. The point was made that Kentucky has many attractive features which are often overlooked or underrated by physicians who might consider the state for a practice location. On the other hand, factors such as industry, that can influence the economic, social, and educational growth of a community, often are of the opinion that the lack of access to medical care is a disadvantage to locating in a particular community. For this reason, the committee requested and received approval to approach the Kentucky Chamber of Commerce to ask them to set up a joint committee to meet with us to work on activities which might attract more health personnel to Kentucky as well as other business which will add to the growth of the state.

Representatives of the committee attended both a regional meeting of the AMA Council on Rural Health in Atlanta in January and the 26th National Conference on Rural Health which was held in Dallas in April. We learned that on a national level, the trend toward the solution to community and rural health problems in many areas seems to be toward health care systems and the utilization of allied health personnel to perform many tasks now being done only by physicians.

The committee feels that utilization of allied health manpower would be effective and, for that reason, has requested time on next year's scientific program to present a segment on new concepts on the utilization of allied health personnel. In addition, the committee has received permission to present an exhibit on our activities during this year's Annual Meeting and we urge all members of the House of Delegates to stop by and learn more about the involvement of one of their committees.

In addition, the committee recommends that county medical society committees responsible for rural health actively support and cooperate with the state, area, and county comprehensive health planning committees in their rural health activities. Also, we urge physicians in rural areas to support and participate, as requested, in rural development programs to improve the effectiveness of rural health care services.

The committee maintains its awareness of current projects in the state regarding alcoholism and drug abuse and has invited representatives of the Kentucky Department of Mental Health to meet with us to discuss ongoing programs in these areas.

The committee is maintaining its active interest in



highway safety and is supportive of a project done by the University of Kentucky College of Medicine and the University of Kentucky Department of Civil Engineering which began a two-year study on recreational vehicular accidents, July 1, 1973.

The committee is in complete agreement with the objectives of activity and expressed a desire to see if the study might also include other types of recreational vehicles such as motorcycles and snowmobiles, if feasible.

It has been a distinct pleasure for me to serve as chairman of the committee through the past Associational year. I appreciate the interest, attentiveness, and active participation of the committee members in the committee's activities.

Stephen B. Kelley, M.D., Chairman

#### **Recommendations, Reference Committee No. 4**

The committee noted the Report of the Committee on Community and Rural Health and appreciates the fine job they are doing.

Mr. Chairman, I move the adoption of this section of the report.

(Motion was seconded and carried.)

### **Report of the Committee on Health Care of the Poor**

In our report to the KMA House of Delegates in 1972, it was the Committee's suggestion that perhaps "a pilot project be organized, possibly seeking funds by a Federal grant through the Kentucky Foundation for Medical Care, Inc., or other sources, such as State Comprehensive Health Planning, to study the opportunities in Kentucky for a regional multi-county, mini-clinic to serve a rural area of Kentucky. The study should include such things as transportation, shopping facilities, physicians already in practice, educational facilities, and other assets that would draw physicians to a rural area. Utilization of the services of the Rural Kentucky Medical Scholarship Fund and the Kentucky Public Health Service were mentioned as possibilities." It was noted that "planning for health service will need to be on an area basis with multiple communities in a local service area planning together to develop health care systems and to attract appropriate health manpower working in a group to provide home, clinic, and hospital care."

The House of Delegates, in accepting the Committee's report, recommended that the Foundation consider the action suggested in the Committee's report.

This has been primarily an exploratory year. The Chairman and KMA staff have met with representatives of the State Department of Health. Through the cooperation of the Commissioner of Health, Mr. Strawn Taylor was assigned to make a number of initial demographic studies in different geographical areas of our Commonwealth.

Informational studies have been made on the idea of a multi-county, mini-clinic, which would provide 24-hour primary care with a working arrangement and availability to secondary and tertiary care facilities. Investigations indicate that Federal monies

would be available for an innovative program of this nature.

Studies indicate that a successful program would require the endorsement of the health providers and community leaders with local financial assistance for land recruiting, housing, and other attractions that would benefit in securing manpower. This is a particular area of concern since it is believed that the major problem would be the availability of manpower. The conditions should be such that there would be a favorable atmosphere to attract recent medical school graduates, including recipients of the Rural Kentucky Medical Scholarship Fund and students who served in rural areas during their period of training. Thus, the thrust from the state level should perhaps be one of guidance and assistance with the financial application coming from the community involved.

All these factors have been discussed with the members of the Committee and with the Executive Committee of the Kentucky Foundation for Medical Care. It was agreed that a project of this type takes time. Hopefully, we will find the ideal location with the necessary enthusiasm for the consummation of a successful project.

Robert C. Long, M.D., Chairman

#### **Recommendations, Reference Committee No. 4**

The committee noted with interest the activities of the Committee on Health Care of the Poor.

Mr. Chairman, I move the adoption of this section of the report.

(Motion was seconded and carried.)

### **Report of the Committee on School Health, Physical Education And Medical Aspects of Sports**

During the year 1972-73, the Committee had one formal meeting in December of 1972 and one informal meeting in March of 1973 during the Kentucky State Basketball Tournament.

For the second consecutive year, the Committee jointly-sponsored a symposia on sports injuries for football coaches, school personnel, and team physicians at Eastern Kentucky University. The additional sponsors were the Kentucky Athletic Association and Eastern Kentucky University. There were over 35 team physicians, as well as 150 coaches and school personnel, in attendance. The featured speaker was H. R. Collins, M.D., Chief of Sports Medicine at Cleveland Clinic.

We have continued to sponsor a sports seminar preceding each football season to aid coaches in prevention and treatment of heat illness and sports injuries.

Working with Dr. Lyman Ginger, Superintendent of Public Instruction, and Joe Billy Mansfield, Commissioner of the Kentucky High School Athletic Association, the Committee was instrumental in setting up a new regulation which requires a physician to be on call at all athletic events involving contact sports, e.g. football, soccer, basketball. Ideally, the name of

the doctor on call would be made available to the visiting team prior to the sports event.

We urge all physicians who are involved as team physicians or as school advisory physicians to become concerned with our programs and to advise us as to how we could better serve them.

I would like to take this opportunity to thank the members of my Committee for their work during the year and the Board of Trustees for their continued support and especially their Chairman, Robert N. McLeod, M.D., and to Jerry Mahoney, KMA staff member.

Ronald E. Walldridge, M.D., Chairman

#### **Recommendations, Reference Committee No. 4**

The committee reviewed the Report of the Committee on School Health, Physical Education and Medical Aspects of Sports and feels that their program, as carried out in the past, is worthy of continued financial support.

Mr. Chairman, I move the adoption of this section of the report.

(Motion was seconded and carried.)

### **Report of the Committee on Public Relations**

The Public Relations Committee held two meetings during this Associational year.

The Committee has felt some frustration in its continuing efforts where certain projects seem to move very slowly. We have, however, I think, accomplished a number of things during this year which are of considerable worth to the Association. Without going into a lengthy dissertation on each item, I want to list some of the projects in which the Committee has had active involvement during this Associational year.

Some of these activities are as follows: 1) Worked in conjunction with the Legislative Committee in setting up the Action '73 project held by AMA in April. 2) Furnished debate material to all colleges and universities in the State who were involved in the national debate subject on health insurance. 3) Worked closely with WAVE-TV in making preparations for the "Ephraim McDowell Story" which was shown on Channel 3 on Christmas Eve. 4) Provided a regular flow of information to the news media regarding various projects in which KMA was involved. 5) Furnished a considerable amount of information on our program to other groups and attempted to assist the Public Relations Department of the Medical Association of Georgia by furnishing background information on much of our program. 6) Participated with a booth at the Kentucky State Fair in conjunction with the Woman's Auxiliary to KMA. (This item was mentioned in our 1971-72 report.) As this report is being written, we are attempting to determine whether or not another State Fair booth this year would be advisable and worthwhile. 7) The Committee spent many hours working with Zimmer-McClaskey-Lewis, Public Relations Consultants, in attempting to provide a KMA exhibit which could be used effectively, not only at such events as

the State Fair, but at Trustee District meetings, Auxiliary meetings, and as a display mechanism possibly in the entrance foyer of the Headquarters Building. This has been a rather frustrating experience, since at the time of writing this report, we have not been able to complete plans for such an exhibit within the area of financing which we feel is reasonable. I am hopeful that we will still be able to complete this project during this Associational year. If, however, this is not possible, the Committee will certainly take a long hard look at this project to determine its full worth to us as an Association.

These are but a few of the projects in which we have been involved and the area of public relations is still one of vast importance to our Association. We do, however, feel that good sound public relations cannot be provided to every physician in Kentucky by our Committee. I might quote Carl A. Hoffman, M.D., President of the AMA, who spoke in Lexington to the Fayette County Medical Society this year. Doctor Hoffman said, "The AMA cannot provide good public relations from its Headquarters. Good public relations begins in the physician's office." For this reason, we feel it is imperative that programs be developed which can be taken to groups such as medical assistants and others who deal directly with the consuming public. I certainly feel that the development of this type program should be a goal of this Committee during the next Associational year.

Even though I think we have felt some frustration, there are continuing improvements being made in our public relations program. The Committee welcomes any suggestions from members of this Association as to new and expanded programs that will help us improve our total efforts in the field of public relations.

Walter R. Brewer, M.D., Chairman

#### **Recommendations, Reference Committee No. 4**

The committee considered the Report of the Committee on Public Relations. The committee wishes to commend this committee for its past actions and recommends that the committee receive adequate funding and support to promote the best image of Kentucky physicians to the public.

Mr. Chairman, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

### **Report of the Chairman of the Board Section Relating to PSRO Only**

Following this, the KMA Board of Trustees held a joint meeting with the Board of Directors of the Kentucky Foundation for Medical Care. The main discussion of this meeting centered around adoption of a policy statement with regard to Professional Standards Review Organization (PSRO) area designations and structures. David A. Hull, M.D., President of the Foundation, explained to all members and guests representing various health agencies that it was the intention of the Foundation to ask that Kentucky be made a single PSRO area. In attendance also were



official representatives of allied organizations, third party carriers, and governmental medical program.

Following a lengthy discussion on all of the problems involved, the group agreed that it would be best for Kentucky to have only one PSRO area.

#### **Recommendations, Reference Committee No. 4**

The Report of the Chairman, Board of Trustees, Paragraph 4 on Page 8 and the first full paragraph on Page 9, relating to Professional Standards Review Organizations only, was reviewed and accepted by the committee.

Mr. Chairman, I move the adoption of this section of the report.

(Motion was seconded and carried.)

## **Resolution G**

### **McCracken County Medical Society**

WHEREAS, P.L. 92-603 (HR-1) (P.S.R.O.), is now the law of the land, and

WHEREAS, this law is one further step toward socialized medicine and the destruction of the free enterprise system of medicine, and

WHEREAS, this law will result in deterioration in the confidential relationship between doctor and patient, and

WHEREAS, this law permits the Secretary of H.E.W. and not the physician to be the final judge in all matters related to medical care, and

WHEREAS, this law can only increase the cost of government spending due to the bureaucracy necessary, and

WHEREAS, the long term cost of all phases of medical care is subject to the same inflationary forces as the remainder of the economy and therefore, these costs cannot but continue to rise as long as the government continues massive deficit spending, therefore, be it

RESOLVED that the physicians of the Kentucky Medical Association accept the responsibility under extreme duress to implement this law, and further be it

RESOLVED that these same physicians work within this law to continue to provide the highest quality of care for their patients, and further be it

RESOLVED that this House of Delegates instruct the Public Relations Committee of KMA to begin a massive program to educate the public and the law-makers of the deleterious effects of this law on the cost, quality, and confidentiality of medical care, and further be it

RESOLVED that this House of Delegates instruct its Delegates to the American Medical Association to introduce a similar resolution in that House, and further be it

RESOLVED that all physicians be encouraged to work diligently towards the repeal of this ill-conceived law.

## **Resolution I**

### **Campbell-Kenton Medical Society**

RESOLVED, that the members of the Kentucky Medical Association declare that the PSRO concept contained in PL 92-603 is ill-conceived and dangerous to patient care; in that it authorized the secretary of HEW to engage in the practice of medicine, as sole and ultimate authority to establish standards and methods of medical diagnosis practice, and treatment.

## **Resolution L**

### **Fayette County Medical Society**

WHEREAS, Public Law 92-603 mandates the establishment of PSROs, and

WHEREAS, the Kentucky Foundation for Medical Care, Inc. has submitted the only formal proposal for the establishment of a PSRO in the state of Kentucky, be it

RESOLVED, that the Kentucky Medical Association go on record as supporting the Kentucky Foundation for Medical Care, Inc.'s statewide proposal for a PSRO, and be it further

RESOLVED, that the Kentucky Medical Association, through its elected representatives, work for the repeal of this law.

## **Resolution N**

### **KMA Board of Trustees**

WHEREAS, Public Law 92-603 stipulates the requirement for Professional Standards Review Organizations, and

WHEREAS, the Board of Trustees of the KMA on March 28, 1973, approved the concept of a single statewide Professional Standards Review Organization for Kentucky to be developed by the Kentucky Foundation for Medical Care, and

WHEREAS, a PSRO implementation plan was drafted and endorsed by many medical and health related organizations in the state, and

WHEREAS, on August 30, 1973, at a PSRO area designation hearing conducted by the Department of Health, Education and Welfare, all organizations represented again endorsed the KFMC proposal, therefore be it

RESOLVED, that the House of Delegates support the concept of a single statewide PSRO for Kentucky as indicated in the KFMC implementation plan and confirm the position taken by the KMA Board of Trustees in this regard, and be it further

RESOLVED, that the KFMC may, if requested, enter into a provisional contracted agreement to serve PSRO purposes, and be it further

RESOLVED, that although it is recognized that repeal or modification of PSRO legislation ultimately may be required to preserve the high quality of patient care, the Kentucky Medical Association should oppose any facets of this current legislation which act to the deterioration of quality care, publicize such

deleterious facets, and place highest priority on developing and pursuing appropriate amendments to preserve the high quality of patient care.

#### **Recommendations, Reference Committee No. 4**

The committee heard prolonged discussion on the resolutions concerning PSRO and considered specifically Resolution G—PSRO (McCracken County Medical Society), Resolution I—PSRO (Campbell-Kenton Medical Society), Resolution L—PSRO (Fayette County Medical Society), and Resolution N—PSRO (KMA Board of Trustees). All proponents and opponents of these resolutions were heard and a rather lengthy discussion ensued. Arthur Reich, M.D., of the Atlanta Office of HEW, was present to answer questions pertaining to PL 92-603. The committee recommends the rejection of Resolutions G, I, L and N and recommends the adoption of a substitute resolution to read:

WHEREAS, Public Law 92-603 stipulates the requirements for Professional Standards Review Organizations, and

WHEREAS, the Board of Trustees of the KMA on March 28, 1973, approved the concept of a single statewide Professional Standards Review Organization for Kentucky to be developed by the Kentucky Foundation for Medical Care, and

WHEREAS, a PSRO implementation plan was drafted and endorsed by many medical and health related organizations in the state, and

WHEREAS, on August 30, 1973, at a PSRO area designation hearing conducted by the Department of Health, Education and Welfare, all organizations represented again endorsed the KFMC proposal, therefore be it

RESOLVED, that the House of Delegates support the concept of a single statewide PSRO for Kentucky as indicated in the KFMC implementation plan and confirm the position taken by the KMA Board of Trustees in this regard, and be it further

RESOLVED, that the KFMC may enter into a provisional contractual agreement to serve PSRO purposes if no substantial changes are made in the plans submitted by the Kentucky Foundation for Medical Care to HEW, and be it further

RESOLVED, that if major changes occur, the new plan be approved by the House of Delegates at a regular or, if necessary, special called meeting, and be it further

RESOLVED, that this House of Delegates, as individual physicians and through its Public Relations Committee and the Committee on Legislative Activities of KMA, work to inform the public and legislators as to the potential deleterious effects of this law on the quality, confidentiality, and cost of medical care, and be it further

RESOLVED, that this House of Delegates instruct its Delegates to the American Medical Association to introduce a similar resolution in that House.

Reference Committee No. 4 recommends the acceptance of the substitute resolution on PSRO.

Mr. Speaker, I move the adoption and implementation of this section of the report.

Robert N. McLeod, Jr., M.D., moved to substitute the last two RESOLVEDs in this Resolution with the following:

RESOLVED, that although it is recognized that repeal or modification of PSRO legislation ultimately may be required to preserve the high quality of patient care, the Kentucky Medical Association should oppose any facets of this current legislation which act to the deterioration of quality care, publicize such deleterious facets, and place highest priority on developing and pursuing appropriate amendments to preserve the high quality of patient care.

Daryl P. Harvey, M.D., of Glasgow, made a substitute motion that the Resolution contained in the report of Reference Committee No. 4 be retained in its entirety and that the following be inserted at the end of the fourth RESOLVED:

RESOLVED that this House of Delegates request and petition the Kentucky Congressional delegation and every member of both Houses of U.S. Congress and the Kentucky Legislature to work for the repeal of PSRO and a copy of this Resolution be forwarded to these legislative bodies, and be it further

(Doctor Harvey's motion was seconded and carried.)

## **Resolution P**

### **Perry County Medical Society**

WHEREAS trained nurse practitioners and medical assistants are used in the practice of medicine in certain states within the framework of their licensure laws, and

WHEREAS the role of these individuals is not defined by any Kentucky state statute, code, or law, and

WHEREAS the Frontier Nursing Service employs nurse practitioners to hold clinics where treatment is administered from a physician-prepared guidebook for such diseases as hypertensive vascular problems, and

WHEREAS an organization in an adjacent county employed medical students to provide charged services, and

WHEREAS a local child development clinic employs trained pediatric nurse practitioners who charge for their services, write orders, and admit patients to hospital, and

WHEREAS the Mountain Comprehensive Health Program has proposals for clinics in this county to be staffed by nurse practitioners, and

WHEREAS the above mentioned para-medical personnel provide their services at times not under the direct supervision of a physician, therefore be it

RESOLVED that the Kentucky Medical Society study the appropriate use of medical assistants and other groups of para-medical personnel with the goal of providing guidelines for their use in areas which are in accordance with the law, and be it further



RESOLVED that the Kentucky Medical Society seek to define the meaning of "direct supervision by a physician" as it applies to his use of these members of his medical team.

#### Recommendations, Reference Committee No. 4

The committee voted to accept Resolution P—Use of Medical Assistants (Perry County Medical Society) and to refer it to the Health Manpower and Placement Services Committee for further study and implementation.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

Mr. Speaker, I move the adoption of the report of Reference Committee No. 4 as amended.

(Motion was second and carried.)

Mr. Speaker, I want to thank Doctors Churney, Craycraft, McElvein, and Richardson for their assistance during the lengthy meeting and preparation of this report.

I also wish to thank our efficient secretary, Mrs. Jean Wayne, for her assistance in preparing this report.

#### REFERENCE COMMITTEE NO. 4

John M. Baird, M.D., Danville, Chairman  
Alvin M. Churney, M.D., Louisville  
Larry B. Craycraft, M.D., Ashland  
Richard B. McElvein, M.D., Lexington  
W. N. Richardson, M.D., Cadiz

Doctor Greathouse read a letter welcoming KMA members to Louisville that was received from Romano L. Mazzoli. He then turned the meeting over to the Vice-Speaker, Doctor Cooper, who presided over the remainder of the meeting.

#### REFERENCE COMMITTEE NO. 5

*W. Fielding Rubel, M.D., Louisville, Chairman*

Reference Committee No. 5 considered the following reports:

20. Report of the Committee on Business Management and Services

23. Report of the Advisory Committee to Selective Service

37. Report of the Coordinating Commission on Governmental Medical Services

38. Report of the Technical Advisory Committee on Physician Services (Title XIX)

39. Report of the Advisory Committee on Title XVIII

40. Report of the Committee on Appalachian and OEO Programs

43. Report of the Committee on Mental Health-Mental Retardation Centers

## Report of the Business Management and Services Committee

The KMA Business Management and Services Committee held two meetings during this Associational year. In addition, there are a number of programs under continuous study and evaluation.

At the first meeting, the Committee members reviewed two programs that were initiated by the Committee last year, and it was agreed that the entire membership should be provided with additional information on the KMA-sponsored health insurance and leasing programs.

In January of this year, the General Leasing Corporation prepared a brochure, which was mailed with the "KMA Communicator" to all members. Kentucky Blue Cross-Blue Shield mailed to all KMA members a brochure on the KMA-sponsored health insurance program. Both companies also advertise regularly in *The Journal of KMA*.

In the previous recommendation to the KMA Board of Trustees that an endorsement be given to the Blue Cross-Blue Shield pre-paid health insurance program, it was agreed that the Committee would investigate other insurance companies. Contacts were made with a number of companies writing this type insurance. These companies indicated they would not be interested in writing a group policy, but did indicate an interest in writing individual policies.

The Committee members also considered group travel plans and heard presentations by representatives of four companies—two national firms that provide packaged programs and two local travel agencies who plan custom-made trips. A membership survey indicated an interest in a charter flight to Los Angeles (Anaheim—Disneyland) in connection with the AMA Clinical Meeting in December of 1973. The Committee negotiated, through a Louisville agency, and several domestic airlines were contacted, with five of the carriers declining to bid because of vacation travel commitments and other factors. The one airline offering a contract required a substantial, non-refundable deposit six months in advance, which was not acceptable to the KMA Executive Committee. For this reason, further negotiations were terminated.

The Committee also reviewed several disability insurance proposals, but determined that a specific endorsement by the Committee at this time not be recommended.

Proposals were requested on a group travel accident policy, which would provide coverage, when traveling on Association business, for KMA Officers, Trustees, Alternate Trustees, Delegates and Alternate Delegates to AMA, KMA Delegates, KMA Committee members, and KMA staff members. In addition to receiving oral and written competitive proposals, several other state medical association plans were reviewed. A plan submitted by the Lumbermens Mutual Casualty Company was approved by the KMA Executive Committee, and on June 1, 1973, a policy became effective with this company providing travel

accident coverage for 457 KMA members and 20 staff members up to age 70 while on Association business. The pre-paid plan was obtained at an approximate cost of one dollar per year per person covered and provides for an individual accidental death or dismemberment coverage of \$50,000 with an aggregate limitation of liability of \$300,000.

The Committee has had under continuous study professional liability insurance. Representatives of three companies have been heard by Committee members, and a number of companies and state medical associations have been contacted for additional information. A report on this was made in March to the KMA Board of Trustees, and the following points of interest were noted:

1. Rates for physicians in Kentucky are low compared with the national average.

2. State-wide contracts would benefit primarily those who are paying higher rates and would increase the cost for those now paying lower rates.

3. The Committee expressed an interest in a state-wide program only if it could be limited to KMA members, which they were informed is not possible by State Law.

4. Kentucky currently is a "buyer's market" rather than a "seller's market," and everything possible should be done to maintain this position.

The Committee members recommended to the Board of Trustees that "there needs to be greater rapport between the medical and legal professions in each county and a more thorough policing of individual members by each county medical society."

The Chairman presented a report to the KMA Executive Committee on May 15, at which time it was noted that KMA and the Kentucky Bar Association now have a new "Interprofessional Code." Several recommendations were made at this meeting, and it was agreed that initiating a group liability insurance proposal at the present time would be premature.

It was agreed that an analysis of other states' experiences be made by the Committee with a report to be made at the next Board meeting. The Chairman has corresponded with other state associations and insurance companies, and, at this writing, a review is being made of the replies. It was also recommended that a joint committee of three members each representing the Kentucky Medical Association and the Kentucky Bar Association be formed to study liability insurance and possible use of screening panels. The Chairman has agreed to serve as a co-chairman of this new committee.

During the coming Associational year, the Committee will continue to review plans and programs they believe will be of benefit to members of KMA.

Thomas M. Marshall, M.D., Chairman

#### **Addendum to Report of the Business Management and Services Committee**

##### **SPECIAL REPORT ON GROUP MALPRACTICE AND LIABILITY INSURANCE**

*(Submitted to the House of Delegates at the request of the Board of Trustees)*

I was asked to make an analysis of other states' experiences in group malpractice and liability insurance. In doing this, I have used, rather liberally, "The Report of the Secretary's Commission on Medical Malpractice," which was published by the Department of Health, Education and Welfare in January of 1973. In addition, I have used various materials which have been sent to us from a number of the state plans.

There are 33 state medical association group medical malpractice plans, and I think it would be of interest to list the states. They are: Alabama, Arizona, Arkansas, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Louisiana, Maryland, Massachusetts, Minnesota, Mississippi, Montana, Nebraska, New Jersey, New Mexico, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Utah, Virginia, Washington, West Virginia, and Wyoming. Several of these plans have been in effect since the 1950's. Various carriers have been used: Employers Mutual of Wausau in three states, St. Paul Insurance Company in eleven, Argonaut in five, Aetna Life and Casualty in seven, Hartford in two, and Continental Insurance Company of North America in three. There are several carriers that have a single plan.

These group plans are sponsored in a variety of ways, some of which I will discuss in more detail later, but I would like to give a short overview of group plans. All these plans are sponsored although the duties of sponsorship vary, ranging from collecting application forms and billing, to claims handling and recommendations on underwriting of individuals whom the carriers consider to be high risks. Underwriting questions raised by either the insurer or a member of the medical association are generally reviewed by the association's screening panels. Generally, the group plans include the customary provision which requires that a doctor consent to any settlement. However, rules of the group plan generally permit a review panel to arbitrate and issue a binding decision when the physician and the insurer disagree on settlement. Under some plans, an insurer may be required to compensate a physician as an expert witness for time lost during a claims defense. One important factor which some plans include gives the association the right to audit the company's malpractice premium, loss, and loss adjustment expenses. This would seem to help regulate the carrier's rate-making, as well as help the group "shop around" if it is discontented.

Methods used to enroll members include assigning primary responsibility for selling the group plan to an exclusive managing broker, to a large agency through independent local agents, to using the carrier's local agents. In general, the lower the participation rate and the larger the number of agents involved, the greater will be the proportion of the premium allocated to sales commissions or selling expenses.

One of the most important features of group plans is their availability. Group professional liability insurance plans for medical societies extend to all members of the society. Physicians in government health facilities or teaching hospitals are also eligible. Most



societies have retained the services of a large insurance broker when seeking a group carrier, and the broker will then develop a program with the society and negotiate with several carriers to find an acceptable plan.

Group plans typically adopt a classification structure similar to the one used by the ISO with general practitioners in the lower rated classification, and each classification is assigned a rate for all physicians within that category. Several group programs have an initial agreement for guaranteed rates over a specified period of time, such as two years. Some plans allow premium payments on a quarterly basis. More recent group plans include a premium refund or dividend provision whereby any excessive premium is returned to the society.

A feature which seems essential to the success of a group program is physician control through peer review committees. This is composed of physicians representing various specialties and different county societies. Some groups have the peer review function primarily at the county society level. One primary responsibility is the review and advice rendered by the committee for any given claim brought before it. A committee is asked to analyze the claim and give a medical opinion as to whether the claim presents negligence by the physician. A decision can then be made by the carrier, attorney, and peer review committee whether to settle or defend the claim. Any question about a physician's eligibility for coverage, his qualifications, or loss experience is referred to the committee by the carrier or by appeal from the physician. Although the carrier usually retains the right to make final underwriting decisions, recommendations of the committee are usually followed. This committee is also an excellent form for initiating prevention activities.

A group program offers physicians the availability of coverage, but essential to the determination of availability is the role executed by the group plan's peer review committee. This peer review of underwriting matters provides the physicians recourse to an appeal process where any action is taken by the carrier with regard to eligibility, non-renewal, cancellation, claims settlement, or rate classification. It also protects him from arbitrary decisions on defense of a case by the carrier.

It was not possible to determine from the available data whether the benefit of lower rates is obtained by participation in a group plan, and I should point out at this juncture the relative cost of constant level medical malpractice coverage for Kentucky. Taking the national average as 100 for Class II practitioners, that is, men who do some minor surgery and assist in some major cases, Kentucky's relative cost for 1972 was 53.9. There were 18 states who had a lower relative cost. The relative cost for surgeons was the same figure, and there were only 17 states with lower costs. Since 1960, the cost of constant level medical malpractice coverage in Kentucky has consistently decreased—from 113.5 to 53.9.

Individual carriers may be able to offer less expensive professional liability coverage to physicians considered a good risk. This occurs when the group

rate structure subsidizes the higher risk specialists within the group. When group rates are structured to avoid "cream skimming," a potentially more severe problem arises. Such group plans are able to obtain a high participation rate and effectively preclude competition from individual carriers. This situation leaves the group with the power to deny physicians the right to practice by the denial of malpractice insurance. In short, the physician, excluded by the group, may have nowhere to go for his insurance coverage. There are certain advantages, of course, to the insurer. Society sponsorship of a group plan assures the carrier of a considerable market in terms of premium volume, and this allows the carrier to spread his risks over a wider base and increases his capacity to absorb higher losses. Although peer review is considered advantageous by some carriers, some believe the process hampers the carrier's ability to settle a case expeditiously and in the cheapest manner. However, the large premium volume allows the carrier to develop specialized claims adjusters with expertise to investigate claims and render decisions on whether to settle or defend. Specialized defense counsel also provides the carrier with experienced attorneys. A group plan with high participation will increase the likelihood that in a multiple defendant suit, all individual defendants will be insured by the group carrier. Thus, a unified defense can be presented and will eliminate many disputes.

The patient must be given some consideration in this matter. Of course, the peer review of claims has the objective of determining whether negligence has occurred. Supposedly, if negligence is present in a case, the society and carrier believe the claimant should be compensated for his injury. Under these conditions, the more effective the peer review process is in judging medical negligence and the greater the extent the carrier is willing to work with the committee, the fairer the outcome for the patient. A disadvantage lies in the fact that the machinery built into group plans is basically for the protection of the physician and not for the protection of the patient. To the extent that group plans are successful in defending all claims they consider non-meritorious, the initiation of claims will be discouraged. Plaintiffs' attorneys will be unwilling to pursue a claim especially where the injury is minor and the probable compensation is less than the cost of litigating the claim. In these instances, the control over which cases are to be compensated is largely held by the group carrier. This can increase the inequity which exists for those patients with a valid, though minor, claim.

Group insurance plans sponsored by state medical societies have grown substantially during the past five to ten years, and this growth will probably continue. However, such a monopoly would be socially unacceptable, and it is desirable to retain the viability of the individual market. Yet group plans are almost uniformly attempting to develop specialists and expertise in all areas; actuarial, underwriting, claims adjustment, loss prevention, etc. Companies with skill and expertise in the malpractice area are attracted by the large premium volume which group plans offer. Hence, competition for group plans is likely to in-

crease, not diminish. Thus, it appears that pure non-availability will not be a problem because malpractice insurance will almost certainly be available to sponsoring groups on a competitive basis in any foreseeable future. However, heavy reliance on group-sponsored malpractice insurance presents two possibly serious problems: first, normal market adjustments in a group setting may be accompanied by adverse massive impacts; and, second, if the individual market disappears, the medical associations will have a monopoly over issuance of malpractice insurance. To alleviate the possibility of adverse market impacts, it has been suggested that group insurance plans require six months' written notice of non-renewal or cancellation. In addition, there should be available a standby plan for up to six months' coverage in the event of the carrier's bankruptcy. This will give the association time to find a replacement. There are a number of features for further research which have been brought up by this study, but it seems apparent, with the spread of group plans, the insurance mechanism is evolving a means of establishing peer group review and exercising a certain form of control over physicians. If peer review is a desirable end in itself, then there ought to be a way of achieving that review without vesting the medical society with a monopoly over the issuance of insurance.

Now I would like to say something about several of the plans which were reviewed in some detail. Although **Florida** has had a professional liability group program since 1961, they recently changed their carrier to Argonaut. Sixty-three percent of their members participate. There is centralized claims handling; centralized coordination of legal defenses; peer review at county medical society levels providing medical expertise; a self-rating program based on loss experience, review of eligibility, renewal, and termination of all insured and new applicants by county medical societies; complete financial disclosures as to rates, claims and reserves and active defense of all non-meritorious claims. Under the present basic plan, the limits of coverage extend from \$25,000/\$75,000 to \$100,000/\$300,000. An excess liability program is sponsored through the Employers group, another carrier. This provides up to \$1 million worth of professional excess liability. Also covered in this is a primary personal liability up to \$1 million for personal acts, residences, automobiles, watercraft, and employers' liability. Personal injury liability is covered as well. Another rating feature written into the new program is the chargeable loss feature. This surcharge mechanism applies to physicians who incur claims losses while covered with Argonaut. If a doctor incurs one claim which results in the payment of losses exceeding \$1,000, he will not be surcharged for that claim. However, on the second claim paid incurred over \$1,000 for that doctor, his rate will be surcharged 50%. The third claim will result in a 300% increase in rate; the fourth claim in a 400% increase; and the fifth claim, 500% increase. In lieu of this, a physician may elect to have a deductible applied to his policy. In this case, he would be required to post bond for the amount of the deductible. The county

medical societies in Florida also carry out a claims prevention program.

The **Minnesota** Medical Association carrier is St. Paul. This is a comprehensive liability protection program covering professional liability, office premises and personal injury liability, offices premises medical payments, and defendants' reimbursement coverage. Limits of liability extend from \$25,000/\$75,000 to \$100,000/\$300,000, and excess coverage is available for \$1 million or more. A peer review committee provides for physician participation which extends to claims review, eligibility recommendations and participation in claims prevention aspects. There is a centralized claims service through two service centers with specialized defense attorneys and close communication and participation with the peer review function. There are five classes. There have been rate increases of 29%, 30%, and 82% in the last three years reflecting the increased number of claims and size of claims payments, yet the rates charged by St. Paul are still only half the rates advised by ISO.

When it is necessary to defend a case, independent attorneys are retained to handle the defense. These legal firms are obtained for their experience and expertise in the professional liability field. An additional feature in the policy is the payment of any expenses for loss of time incurred by the physician in attending court.

The peer review function is not carried out on a county level in Minnesota as it showed that local biases and the "conspiracy of silence" were found to persist. Thus, the Association believes that centralized peer review is more conducive to effective review control.

The Medical Society of **New York** employs Employers Mutual of Wausau as its carrier. It also employs an actuary who reviews all the brokers' records and stays abreast of the company's rates and rate-making policies. Seventy-eight percent of the physicians are insured under the group program. Availability of coverage is determined by the Society's Professional Medical Liability Insurance and Defense Board. This protection also extends to the matter of cancellation. There are seven classifications of rates to which physicians are assigned according to specialties. The maximum limits on coverage for each classification of coverage within the area is \$200,000/\$600,000 with the majority of doctors choosing the \$500,000 to \$1,500,000 amounts. In the New York program, rates have increased 439% in the last five years. Lower rates and lower losses are not anticipated.

The Professional Medical Liability Insurance Board has experienced an overwhelming workload, yet the assistance and powers of the Board in determining eligibility is the strongest selling point of the group program as it insures a continuing availability of coverage for eligible members. The society has been active in developing objectives for physician education also in that it requires all new applicants to the state society's malpractice insurance program to attend a seminar on malpractice problems given under the auspices of the Malpractice Insurance and Defense Board. A panel program is a required portion of the curriculum at the junior and senior level in medical



schools in regard to malpractice. Also, a speakers' bureau of attorneys, physicians, and insurance representatives is available. At each state medical society meeting, a seminar on malpractice is an annual presentation, and a malpractice workshop is also carried out to an annual basis in conjunction with the meeting.

The county medical societies in New York State have their own peer review committees, which are malpractice defense committees composed of a minimum of six to a maximum of 24 members representing most specialties. When a case is brought before a committee, a specialist in the same field as that of the defendant doctor is asked to review the case and present his findings. The defendant doctor, the defendant's attorney, the carrier's representative and the full committee are usually in attendance. After hearing the arguments, one of the following outcomes usually results: the physician deviated from acceptable practice, the specialist reviewing the case will be asked to testify that the physician was not negligent, or the case should be settled because the physician is vulnerable in some areas. The findings and recommendations are not binding, and no written minutes are recorded. No final action may be taken by the insurance carrier in a malpractice case without the written consent of the doctor. If a doctor refuses to settle and the carrier has independent experts that say the suit cannot be defended, the doctor has the right to bring his case before a medical arbitration panel of specialists. The doctor, the insurance company and the state society each select a specialist to sit and hear the case. After thorough review, their decision is legally binding on both the doctor and the carrier. In all actions before the county medical society Malpractice Defense Committee and the Medical Arbitration Panel, the claimant who has initiated action against the doctor is not involved in the proceedings. These hearings are strictly for the benefit of the doctor and the insurance company to assist them in determining a proper course of action based on expert testimony concerning the merits of the case.

The Medical Society of Virginia employs St. Paul, and the plan is marketed through their licensed agents. Ninety-seven percent of the society's 4,300 members participate in the plan. Society involvement is minimal with the carrier both operating and administering the plan. It is a self-rating program based on Virginia physicians' experience, specialized claims handling and defense, an annual review of the program with the carrier and body of appeals, and a medical-legal panel review of some claims. The rate structure of St. Paul for Virginia is about 18% below ISO standard rates. The structure is based on the five standard ISO classifications. The number of claims being filed against physicians has risen recently to nearly 150 cases a year. However, the company and society agree that any claim determined to be without merit will be defended. The society has an Insurance Committee which meets annually with the carrier to review the entire program. It takes no part in screening or peer review functions. Contact is maintained on a day-to-day basis between the administrator of the society and a regional office. There

is a physician-legal panel consisting of representatives of the legal and medical professions. Currently there are 12 members of each profession on this committee. There is no official record or transcript of the hearing. The panel does not hear claims involving multiple defendants and hospitals nor is it action binding. The society's House of Delegates has appointed a committee to investigate a plan of operation for a peer review foundation, which is being discussed at the present time.

The Illinois State Medical Society has had a malpractice insurance program for five years, and about one third of its members participated in the program, yet there were some staggering increases in premium rates. A new program was started on the first of June of this year. The carrier is Hartford Fire Insurance Company. The medical society is involved in the claims and underwriting procedures. It is a five-year contractual commitment, and quarterly billing with no interest charge. Limits of \$100,000 to \$300,000 or up to \$5 million are available. There is a right to settle provision for a physician or medical review committee, and there is a full and regular financial disclosure. In addition, there is a rate premium credit incentive feature for premium dollars not used to pay basic plan claims and expenses. Additional personal excess liability protection can be obtained provided at least \$1 million of professional liability insurance is obtained. This covers automobile, homeowners, and watercraft liability and many other liability exposures. A unique feature is that a substantial part of the policy premium earns interest at the rate of four percent compounded quarterly, and this is added dollars to the fund available for losses and is used to help reduce the effect of inflation and possible premium losses.

In Maryland, St. Paul Insurance Company is the present carrier. They have had a group program for over ten years which insures about 3,700 of their members. However, they are not entirely satisfied with its operation. Recently a statute was adopted which would require reporting by all companies which underwrite insurance in Maryland. This was brought about because concise data on operations could not be obtained from the carrier. Some specific action is at hand in that state. As you probably know, they have a Commission on Medical Discipline, which is a state agency composed entirely of doctors. It was recently written up in *Medical Economics*.

The Tennessee Medical Association has had an insurance plan for professional liability for 15 years. The Shelby Mutual Insurance Company of Shelby, Ohio, has been the underwriter since its inception, and some 75% of the physicians participate in the Association plan. They are now realizing about a 15% reduction against the normal rate a physician would have to pay for liability and malpractice insurance outside the plan. It is interesting that the Insurance Service Office of the United States recently petitioned the Insurance Commission of the State of Tennessee for a 100% increase in rates. However, after the appearance before the Commission of a committee composed of representatives of the agency that administers the plan, as well as an attorney and Ex-

ecutive Director of the Association, the rate increase was denied. There are five classifications with rate limits from \$25,000/\$75,000 up to \$200,000/\$600,000. Personal injury and premises liability can also be obtained under the same program when written with the professional liability coverage.

The Medical Association of Alabama recently put into effect a plan underwritten by Employers Insurance of Wausau. This is less than two years old. There is a guarantee that there will be no increase in base rates for at least two years time. Only members of the medical association are eligible, and the policy cannot be cancelled or restricted without prior consultation with the medical association. The Malpractice Insurance Committee reviews and evaluates the medical and settlement aspects of all claims. Coverage limits are available up to \$1 million for each claim and \$3 million aggregate. Employees professional liability, as well as personal and property damage liability, is available. The plan also reimburses necessary expenses for time lost at the request of the insurance company in attending actual court trials. There is also a personal and business liability umbrella policy with limits to \$4 million.

It appears that group plans are here to stay. They appear to assure a market for the hard-to-insure and may offer options which are not always available in the individual market. Hopefully, they will encourage a good central data agency, and with the use of a medical society's insurance committee or peer review, a doctor does have more control over his malpractice insurance situation in a group plan which offers him hopefully more expertise. I'm not sure that group plans bring about a decrease in rates. The cost of constant level of medical malpractice insurance coverage increased seven-fold for physicians and ten-fold for surgeons between 1960 and 1972. However, in Kentucky during the same period of time, there was a 50% reduction.

In order to initiate a group plan, it would seem that a malpractice insurance questionnaire would have to be circularized in order to determine practice and professional characteristics, especially the instance of involvement in malpractice suits against the individual or if malpractice insurance had been cancelled, and, of course, if the physician desired an Association-sponsored insurance program. At the same time, the inquiry could learn if the physician felt that the medical society should be actively involved in reviewing eligibility, peer review, review of claims and some claim prevention education, and, of course, would the individual support a program in which the state society was actively involved and whether he would change from his present insurance company if the cost was comparable.

Thomas M. Marshall, M.D.

#### **Recommendations, Reference Committee No. 5**

Reference Committee No. 5 reviewed the Report of the Committee on Business Management and Services and recommends that the report be accepted.

The Reference Committee would like to add its commendation to Thomas M. Marshall, M.D., Chairman, for his diligent and thorough research in the

comparative study of malpractice insurance plans in other states.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion seconded and carried.)

## **Report of the Advisory Committee to Selective Service**

The purpose of this quasi-governmental Committee is to maintain as much as possible an appropriate balance and distribution of medical personnel between our civilian population and the Armed Forces.

With the absence of a draft for physicians, dentists, or allied specialists, it was unnecessary for the Committee to meet during this Associational year. The Chairman has handled several specific requests by phone and through correspondence.

The Committee members and Colonel Taylor Davidson and his staff with the State Selective Service office have been most helpful and cooperative.

George P. Archer, M.D., Chairman

#### **Recommendations, Reference Committee No. 5**

Reference Committee No. 5 reviewed the Report of the Advisory Committee to Selective Service and views with great pleasure the absence of any draft of physicians, dentists, or allied specialists in this year.

Mr. Speaker, I move the acceptance of this section of the report.

(Motion seconded and carried.)

## **Report of the Coordinating Commission on Governmental Medical Services**

The Coordinating Commission on Governmental Medical Services held two meetings during the Associational year. At the first meeting, a policy statement was formulated regarding the assignment of physician personnel of the National Health Service Corps in Kentucky. With the approval of the KMA Board of Trustees, this was sent to the Director of the Corps.

The Commission also discussed at length the desirability of periodic meetings of physician members of the State and Regional Comprehensive Health Planning Councils. Following this, KMA staff mailed a letter and reply postcard to the various physician members of these health planning councils to determine their desires and willingness to attend such a meeting. Since there was only a 40% affirmative response, it was felt that there was insufficient interest to set up such meetings.

At the second meeting of the Commission, members reviewed briefly the various programs which they monitored, and more complete reports are included under the individual Committee reports.

Frank M. Gaines, Jr., M.D., Chairman



#### **Recommendations, Reference Committee No. 5**

Reference Committee No. 5 reviewed the Report of the Coordinating Commission on Governmental Medical Services.

The Committee discussed the problem with coordinating the functions of the various committees of KMA and suggests that there may be a problem in this area and that studies should be given to the matter.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion seconded and carried.)

### **Report of the Technical Advisory Committee on Physician Services (Title XIX)**

The five-member, KMA-appointed Technical Advisory Committee on Physician Services (Title XIX) is a quasi-governmental body called for by Kentucky Statutes. It is one of several provider groups "established for the purpose of acting in an advisory capacity to the Advisory Council for Medical Assistance."

This Committee met on four occasions and had excellent attendance. These meetings were generally held prior to the Advisory Council meetings, which were also attended by this Committee's members.

We are appreciative of the relationship this Committee has with staff members of the State Departments of Health and Economic Security.

The Committee would like to point out several items that have received action during the past Associational year.

1. At the request of the KMA Executive Committee, a letter was written to Howard Bost, Ph.D., Chairman of the Advisory Council for Medical Assistance, reaffirming that physicians should be paid usual and customary fees for in-hospital services. Statistical information provided by the Medical Assistance Division of the Department of Health regarding budget estimates for payment of physicians' usual and customary fees for in-hospital services under KMAP revealed that Kentucky physicians are subsidizing KMAP by approximately \$13.3 million. This information was included in the letter to Doctor Bost and provided to KMA members in an editorial by KMA President Lee C. Hess, M.D., which appeared in the February, 1973, issue of *The Journal of KMA*.

2. The KMAP policy of requiring appropriate consultations before sterilizations performed are covered under the Program was reviewed since there had been an indication that some hospitals had liberalized their guidelines. It was the recommendation of the Physicians Technical Advisory Committee that the current policy not be changed.

3. The Committee rejected a proposed change in the method of billing when Part B of Medicare is involved. The proposed change would have required additional clerical work by physicians' office staffs. The Advisory Council for Medical Assistance accepted the Committee's recommendation that the billing remain as it is currently being done.

4. A problem regarding proper identification of recipients eligible for KMAP coverage, prior to the

issuance of the official identification card, was reviewed by the Committee. A temporary identification card system was initiated by the Department of Economic Security, and, at the suggestion of the Committee, a letter of explanation and supporting material was sent to each Kentucky physician by the Medical Assistance Division of the Department of Economic Security.

As Chairman, I wish to thank the dedicated members of this Committee who have served diligently in the interest of an improved Medicaid Program in Kentucky.

William T. Watkins, M.D., Chairman

#### **Recommendations, Reference Committee No. 5**

The Reference Committee reviewed the Report of the Technical Advisory Committee on Physician Services (Title XIX). The Reference Committee would like to emphasize to the House of Delegates that estimates by the Medical Assistance Division of the Department of Health indicate that Kentucky physicians are subsidizing the Kentucky Medical Assistance Program by approximately \$13.3 million annually. We urge the Committee to continue to strive for inclusion of in-hospital charges.

We would also like to emphasize the importance of physicians continuing to submit usual and customary fees on charges sent to the KMAP so that profiles may be kept current. This is of great potential importance in view of possible changes in administrative policies of KMAP.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion seconded and carried.)

### **Report of the Advisory Committee on Title XVIII**

The Advisory Committee on Title XVIII met with representatives of the Medicare carriers on March 22, 1973, to discuss changes made in the Medicare Law by the passage of Public Law 92-603.

This bill made over 100 changes in Medicare and Child Health Programs. Medicare changes discussed included coverage in intermediate care and skilled nursing facilities; modifications of the 14-day transfer to permit a patient to enter a SNF within 28 days; disability benefits; coverage of previously uninsured individuals under Part A; reimbursement for services of teaching physicians; disability eligibility coverage of chronic renal disease; review of health care provided by or in institutions by Professional Standard Review Organizations after January 1, 1974; the increase in Part A coinsurance and deductibles and the increase of Part B premiums and deductibles; coverage of cost of certain supplies related to colostomies; reimbursement, through a single capitation payment, to Health Maintenance Organizations; and the modification of Part B to provide 100% reimbursement of the cost of home health service.

Representatives of the Medicare Office of the Metropolitan Life Insurance Company discussed some problems experienced in processing claims. The Committee has recommended, through the KMA Board

of Trustees, that the Lexington Medicare Office sponsor regional seminars for staff members of physicians' offices to assist them in the proper method of billing for physician services under the Medicare Program.

We appreciate the interest, cooperation, and diligence of our Committee members during the past year.

Robert E. Smith, M.D., Chairman

#### **Recommendations, Reference Committee No. 5**

Reference Committee No. 5 reviewed the Report of the Advisory Committee on Title XVIII and commends the Committee for its continuing services to the physicians of the State.

Mr. Speaker, I move the acceptance of this section of the report.

(Motion seconded and carried.)

### **Report of the Committee on Appalachian and OEO Programs**

The Committee on Appalachian and OEO Programs met twice during the Associational year and accumulated information from various guests, who were able to discuss with us the program changes in the various OEO and Appalachian Programs. The summary of the status of these programs follows.

With the demise of the OEO Program in Washington, no new health programs are being funded. There are three existing grants in Kentucky. The Park-DuValle Neighborhood Health Center in Louisville apparently is doing well although they anticipate a decrease in funds with some curtailment in programs. The Hunter Foundation for Medical Care in Lexington has been under way only a few months and, from the information we have, is not firmly established as yet. The third program in Floyd County, after its cancellation a year ago, has been funded with a planning grant, which is still in effect, but there have been little or no new developments this year.

The funding for the Appalachian Health Programs will continue for several more years, but a number of the programs are being phased out this year. The proposal to start a Health Maintenance Organization in Southeastern Kentucky is still in the planning phase, and there is nothing new to report on this project during the past year.

Frank M. Gaines, Jr., M.D., Chairman

#### **Recommendations, Reference Committee No. 5**

Reference Committee No. 5 reviewed the Report of the Committee on Appalachian and OEO Programs. It was the opinion of the Reference Committee that this represents another example of the need for continuing coordination of the various functioning committees of KMA.

Mr. Speaker, I move the acceptance of this section of the report.

(Motion seconded and carried.)

### **Report of the Committee on Mental Health- Mental Retardation Centers**

The 1972 KMA House of Delegates approved a recommendation that a new committee be established and charged with the responsibility of monitoring the growing chain of State and Federally supported mental health and mental retardation centers. This Committee was appointed by the KMA Board of Trustees for this purpose.

The House of Delegates also passed Resolution Q, in which it was resolved that the State Comprehensive Health Planning Agency study the cost, patient load and care, staffing and efficiency of the comprehensive mental health-mental retardation centers and inform the citizens of Kentucky and the Kentucky Medical Association of its findings. This resolution was sent to State Comprehensive Health Planning in December of 1972 by KMA Board of Trustees Chairman Robert N. McLeod, Jr., M.D., and the committee of State CHP has been appointed for this study.

The 1972 Kentucky General Assembly passed SCR 48, which is a Senate-House concurrent resolution requesting that a study be made of mental retardation programs. It is our understanding that this report will be available this fall.

The new KMA Committee met on February 8 and on May 3, 1973. At the first meeting members commented on the statistical publication, "Patterns of Progress", which had been published by the Department of Mental Health. The Committee Members discussed methods of obtaining additional information, and a three-page questionnaire was designed, which was later sent to all county medical society secretaries and to the Office of State Comprehensive Health Planning.

Responses to the questionnaire were very poor and, at the May 3 meeting of the Committee, a new one-page questionnaire was designed to determine physician acceptance of the mental health-mental retardation program in Kentucky. All Committee members were provided with a list of the names and telephone numbers of the presidents of the county medical societies in their areas that have ten or more physician members.

Prior to the second meeting of the Committee, the Commissioner of Mental Health requested representation on the Committee. Stanley Hammons, M.D., a staff member of the Department of Mental Health, was appointed to the KMA Committee.

A request was also received from the Chairman of the Advisory Council on Mental Health asking if a representative could attend the next KMA Committee meeting. All members of the Council were invited. The meeting was attended by Council Member Arthur R. Kasey, M.D., who expressed the desire that the KMA Committee and the Council continue liaison.

Since Doctor Hammons could not attend the meeting, he has been forwarded copies of the digest, questionnaire and has been requested to secure certain cost information believed to be available through



the Mental Health Department's electronic data processing division. There has been no response from the Department of Mental Health to several requests for financial and statistical data. This information was very basic for this Committee to perform its activities.

We did note with interest the television documentary on "First Tuesday" shown in June, which was most complimentary of the patient care at the new Outwood facilities in Somerset, Kentucky.

Although it has been a year in which there have been requests from different sources for information on mental health-mental retardation programs, there is little to report. Communication between the medical profession and those in charge of mental health-mental retardation programs seems to be one of the real stumbling blocks.

Thomas A. Weldon, M.D., Chairman

#### Recommendations, Reference Committee No. 5

Reference Committee No. 5 reviewed the Report of the Committee on Mental Health-Mental Retardation Centers. The Reference Committee members reviewed with concern the difficulties the Committee has encountered in securing information about mental health programs in the State of Kentucky. We would urge that in spite of the frustrations met, the activities of the Committee should continue.

Ed Morgan, M.D., of Louisville, appeared and supplied a great deal of detailed information about specific examples of physician liaison problems with some of the existing programs.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

Mr. Speaker, I move the adoption of the report of Reference Committee No. 5 as a whole.

(Motion was seconded and carried.)

Mr. Speaker, I would like to thank each member of this Committee for his help in reviewing these reports and writing the Reference Committee report and Mrs. Doris Crume for her assistance.

#### REFERENCE COMMITTEE NO. 5

W. Fielding Rubel, M.D., Louisville, Chairman  
Thomson R. Bryant, Jr., M.D., Lexington  
W. H. Keller, M.D., Frankfort  
Paul F. Maddox, M.D., Campton  
N. H. Talley, M.D., Princeton

### REFERENCE COMMITTEE NO. 6

*James L. Ferrell, M.D., Paris, Chairman*

Reference Committee No. 6 considered the following reports:

11. Report of the KMA Judicial Council
13. Report of the Rural Kentucky Medical Scholarship Fund
24. Report of the Committee to Study the Constitution and Bylaws

25. Report of the Interim Meeting Program Committee

26. Report of the McDowell House Board of Managers

27. Report of the Memorials Commission

29. Report of the Committee on Orientation

5. Report of the Chairman, Board of Trustees, Paragraphs 2 and 3 on Page 12 relating to the Ad Hoc Committee to Study Abortion Guidelines and the Addendum to the Report of the Chairman on the full report of the Ad Hoc Committee to Study Abortion Guidelines.

Resolution C—Abortion Policy (Campbell-Kenton County Medical Society)

Resolution D—AMA Rubella Policy (Campbell-Kenton County Medical Society)

Resolution E—Residents and Interns Proportionate Representation in the KMA House of Delegates (Jefferson County Medical Society)

Resolution F—Amendments to Bylaws (KMA Board of Trustees)

Resolution H—Position Statement on Abortion (KMA Board of Trustees)

## Report of the KMA Judicial Council

As of December 21, 1973, four new Council members, Gabe A. Payne, M.D., Chairman; E. C. Seeley, M.D.; Roy H. Moore, M.D.; and James O. Willoughby, M.D., began service on the Judicial Council. Since that date the Council has reviewed over 30 items, and in each instance the complaint or matter was resolved or passed on to the appropriate body, or in some instances the matter is still under investigation by the Council.

Among the first actions was consideration of matters referred from the 1972 House of Delegates as to the 1972 Judicial Council Report. The following items were referred back to the Council from the House of Delegates for either re-consideration or clarification:

2) "That it is unethical for physicians to permit the clinic by which they are employed or with which they are associated, to circularize the profession with material (whether by direct mail or through articles in a magazine) which gives their names and lists the services they are prepared to render on referral."

ACTION TAKEN: "That it is unethical for physicians to permit the clinic by which they are employed or with which they are associated, to circularize the profession with material (whether by direct mail or through articles in a magazine) which gives their names and lists the procedures they are prepared to render on referral."

4) "That it is unethical for surgeons located in one city to travel to out-lying towns to do surgery unless they examine the patient prior to the surgery and make their own diagnosis, write the pre-operative and post-operative orders and provide the post-operative care. The surgeon's charging of his usual and customary fee (which ordinarily includes post-operative care) while allowing the re-

ferring physician to provide (and charge for) the post-operative care was specifically condemned."

ACTION TAKEN: None

5) "That it is not improper or unreasonable for hospitals to require physicians to take their turn on call at the emergency room, as a condition of staff membership."

ACTION TAKEN: "The Council felt that this should be left up to the bylaws of the individual local hospitals but reaffirmed that this requirement could be a condition of active staff membership." The Council also noted the following statement from the *JCAH 1971 Guidelines for the Formulation of Medical Staff Bylaws, Rules, and Regulations*. "The medical staff shall adopt a method of providing medical coverage in the emergency services area (department). This shall be in accord with the hospital's basic plan for the delivery of such services, including delineation of clinical privileges for all physicians who render emergency care."

(6) "That the practice of midwifery is not the practice of medicine and midwives may not practice anesthesia."

ACTION TAKEN: None

7) "That a technician (however well trained) who is not a licensed physician, cannot qualify as a first assistant on major surgery."

ACTION TAKEN: The Council members discussed the fact that this situation in hospitals may differ widely according to the availability of physicians. The Council also felt that based on the competency of available technicians, this must be a matter of local determination for the hospitals and that where conditions dictated, relaxation of this guideline might be necessary.

8) "That the practice of anesthesia is a part of the practice of medicine and that the administration of anesthetics by personnel who are neither physicians nor directly supervised agents should be challenged in the courts."

ACTION TAKEN: The Council has recommended to the Board of Trustees of KMA that it consider recommending to BC-BS that future payments to free lance nurse anesthetists be made directly to the nurse anesthetist; and further the Council has gone on record as recommending to BC-BS that regardless of how they pay the nurse anesthetist that it be approved by the operating surgeon. The Judicial Council determined it was not appropriate at this time to institute legal proceedings in regard to the definition of anesthesia.

The Council has met on the following dates: December 2, 1972; January 31, 1973; March 15, 1973; May 10, 1973; June 21, 1973; and July 18, 1973 and considered complaints from patients, physicians, and third parties, which related to treatment received, fees charged, billing procedures, and other aspects of medical practices, and in two instances, its availability.

Included in these matters was a third party complaint against a physician's treatment of patients. This involved a lengthy hearing carried over to two Council meetings, and the result of this hearing has initiated the Council's efforts toward establishing a continuing education program for physicians desir-

ing such services, and for those who have come before the Council and who in the Council's opinion need to avail themselves of such education.

There was also heard at length a complaint from the Lexington Medicare office concerning billing procedures.

Inquiries and complaints have been received concerning problems created by various companies performing multiphasic screening tests within the State, and the Council members felt that some action was indicated to provide guidelines for the KMA membership. Following some research on this subject, the Council voted to advise the House of Delegates of the following statement it has approved concerning multiphasic screening tests and also would like the House to be aware that continuing research will be conducted on this matter:

"Multiphasic health testing (MHT) is one method of initial health data acquisition. It can be performed by automated or non-automated techniques or by a combination of the two. It consists of collecting, recording and reporting test results and, as such, it is an incomplete health service. To be meaningful, provisions must be made to have a physician evaluate and interpret the test results. An attending physician may not receive a rebate, referral fee, commission, or the like from a program whose facilities have been used by his patients. A physician who receives reports from an MHT organization involving persons who have made no prior arrangement with him for their evaluation may choose to accept such persons as his patients, and communicate with them and provide such additional services as are necessary and usual in the physician-patient relationship. If the physician elects not to accept the patient, he may return the reports to the MHT organization. If he does so, it is recommended that a covering letter be sent, stating that he has not evaluated such reports and that the MHT organization take the necessary steps to inform the persons tested of the need to make arrangements with a physician for their evaluation and follow-up care if needed."

In a matter brought before the Council referable to advertising medical services, the Council has received and studied both information and legal briefs concerning the matter, but is also seeking further consultation and information. This action has not been resolved at this time, but it is anticipated that an opinion will be rendered by the Council within the next several meetings.

The Judicial Council realizes that the Trustees and Trustee District Grievance Committees represent its sole means of fact-finding in relation to many of its complaints referred to the Council, and would like to thank and commend the Trustees who have been of great assistance to us in this year, and inform them that the Council can rarely proceed to consider any case until their findings are returned.

The Judicial Council would especially like to thank Mrs. Linda O'Daniel, the past KMA Judicial Council Recorder, and Mr. E. Gaines Davis, Jr., former Secretary and Legal Counsel for the Judicial



Council. for their most helpful assistance in Judicial Council proceedings.

Gabe A. Payne, M.D., Chairman

#### **Recommendations, Reference Committee No. 6**

Reference Committee No. 6 considered as its first order of business the Report of the KMA Judicial Council. There was discussion in this reference committee of the items referred back to the Council from the House of Delegates in 1972. Gabe A. Payne, Jr., M.D. noted under number 2, the only change was "procedures" substituted for "services", which is the eighth word in the seventh line from the bottom.

There was considerable discussion regarding number 7 and explanation as to the action taken by the Council. The Reference Committee reviewed the report carefully and heard all discussion through page 3.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

The section of the Judicial Council Report dealing with multiphasic screening tests was reviewed, and the necessity to have physician evaluation was voiced by KMA members. The Reference Committee recommends on page 4, line 7 that the words "to be meaningful" be deleted. This sentence in the report will now read "Provisions must be made to have a physician evaluate and interpret the test results".

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

### **Report of the Rural Kentucky Medical Scholarship Fund**

The Rural Kentucky Medical Scholarship Fund, established in 1946 for the purpose of providing a better distribution of physicians in rural Kentucky, now has 194 physicians in practice in 86 counties, with 28 serving in critical counties.

There are now outstanding 249 notes to 122 borrowers, for a total in excess of \$541,000. These recipients are either in medical school, interning, or in the Armed Services.

All loans and contracts are processed at the KMA Headquarters Office. Progress reports are secured on students in medical school, and contact is maintained with interns, recipients in the Armed Services, and past recipients in practice. The Louisville Trust Company serves as the fiscal agent for the Fund.

This year, regular annual loans were increased from \$2,500 to \$3,000 and critical county loans were increased from \$3,000 to \$3,500. The loan agreements are to medical students who are residents of Kentucky and have agreed to practice in an approved area of the state one year for each loan received. Forgiveness features are applicable to recipients who establish practice in designated areas of critical or semi-critical need.

A recipient who enters practice in a critical county may leave after satisfying his obligation to the Fund. Listed as causes for moving are the unreasonably long hours of work, the inability to participate in continuing education, and the lack of time for family, church, recreation, etc. In order to improve the lot of these courageous practitioners, the Trustees of the Fund adopted a policy in 1973 of, where possible, allowing two or three practitioners to form a mini-group in either a single critical county, or possibly a group of two or three small counties. Hopefully, this arrangement will help to offset some of the liabilities of solo practice in this atmosphere.

Doctor Simpson, in noting the success of the program over the past 27 years, expressed particular appreciation for the interest and support of Governor Wendell H. Ford, Health Commissioner William P. McElwain, M.D., and the members of the Kentucky General Assembly.

G. L. Simpson, M.D., Chairman

#### **Recommendations, Reference Committee No. 6**

Reference Committee No. 6 reviewed the Report of the Rural Kentucky Medical Scholarship Fund. The Chairman of this Committee, G. L. Simpson, M.D., was present to make comments on this report as well as answer questions from the audience.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

### **Report of the Committee to Study The Constitution and Bylaws**

The Committee to Study the Constitution and Bylaws met this year on May 23 for its annual session to implement Bylaws changes that had been proposed to the committee and to generally update the Bylaws.

The committee was directed to consider a suggestion which would have placed the broad makeup of the Judicial Council policies under the Constitution rather than in the Bylaws as is currently done. After a considerable discussion it was the opinion of the Committee to Study the Constitution and Bylaws that no changes be made in regard to the policies of the Judicial Council at this time.

We also considered a resolution which was adopted by the American Medical Association last year which recommended that all constituent associations and scientific sections examine now and periodically the conditions, qualifications, methods, procedure, tenure, and related aspects of the election of their delegates to the AMA House of Delegates. After due consideration, the committee felt that KMA's current policy of not limiting the number of terms of the delegates to the AMA is adequate.

The committee took note of the fact that the KMA Board of Trustees had appointed a parliamentarian to sit in the House of Delegates and advise on all matters of parliamentary procedure. The committee feels that, at the present time, the current

Board policy on the duties of the parliamentarian, that is, not to have the duties written into the Constitution and Bylaws, is a reasonable one and concurs with the duties of the parliamentarian as outlined by the Board.

Robert L. McClendon, M.D., Chairman

#### Recommendations, Reference Committee No. 6

Reference Committee No. 6 reviewed the Report of the Committee to Study the Constitution and Bylaws. Discussion regarding the terms of delegates to the AMA was short and to the point.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

## Resolution F

### KMA Board of Trustees

WHEREAS, the 1972 KMA House of Delegates adopted Sturgis' *Standard Code of Parliamentary Procedure* (latest edition) as its official guide for Parliamentary procedure, and

WHEREAS, the motion "to lay on the table" has a different meaning under our former parliamentary guide (Roberts' *Rules of Order*) than it does in our present guide, and

WHEREAS, the wording under Chapter XIII of the KMA Bylaws is inconsistent with our present parliamentary guide, and

WHEREAS, the method of amending the bylaws is somewhat restrictive, and to many confusing, having created a number of misunderstandings in the past, now therefore be it

RESOLVED, that Chapter XIII, Amendments, which now states:

"These bylaws may be amended at any session of the House of Delegates by a majority vote of all the delegates present at that session, after the amendment has laid on the table for one day, whereas any amendment proposed in a reference committee not having laid on the table for two days, requires a two-thirds vote."

Shall be changed to read as follows:

1. These bylaws may be amended at any session of the House of Delegates by a majority vote of the delegates present at that session, provided: (1) the amendment proposed is presented in writing to the delegates thirty days prior to the session, or, (2) the amendment is introduced in writing at a regular session of the House of Delegates and considered at the following session, the vote on said amendment having been postponed definitely for a period of at least one day.
2. An amendment to or change in the bylaws may be proposed by a reference committee or by the Board of Trustees at the final session of the House of Delegates, but, not having been postponed definitely for a period of one day, requires a two-thirds vote.
3. An amendment to these bylaws may be proposed in writing by an individual delegate at

the final session of the House of Delegates. If such an amendment is proposed, the proposal will be postponed definitely and studied by the appropriate reference committee at that time, reporting their recommendation back to the House of Delegates before the final session is adjourned. Such an amendment having not been postponed definitely for a period of one day, requires a two-thirds vote.

#### Recommendations, Reference Committee No. 6

Reference Committee No. 6 next reviewed Resolution F introduced by the KMA Board of Trustees regarding amendments to the bylaws. The reason for this amendment was explained in detail by Bennett L. Crowder, M.D., Hopkinsville. The RESOLVED of this resolution is as follows:

"RESOLVED, that Chapter XIII, Amendments, which now states:

"These bylaws may be amended at any session of the House of Delegates by a majority vote of all the delegates present at that session, after the amendment has laid on the table for one day, whereas any amendment proposed in a reference committee not having laid on the table for two days, requires a two-thirds vote."

Shall be changed to read as follows:

1. These bylaws may be amended at any session of the House of Delegates by a majority vote of the delegates present at that session, provided: (1) the amendment proposed is presented in writing to the delegates thirty days prior to the session, or, (2) the amendment is introduced in writing at a regular session of the House of Delegates and considered at the following session, the vote on said amendment having been postponed definitely for a period of at least one day.
2. An amendment to or change in the bylaws may be proposed by a reference committee or by the Board of Trustees at the final session of the House of Delegates, but, not having been postponed definitely for a period of one day, requires a two-thirds vote.
3. An amendment to these bylaws may be proposed in writing by an individual delegate at the final session of the House of Delegates. If such an amendment is proposed, the proposal will be postponed definitely and studied by the appropriate reference committee at that time, reporting their recommendation back to the House of Delegates before the final session is adjourned. Such an amendment having not been postponed definitely for a period of one day, requires a two-thirds vote.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

## Report of the Interim Meeting Committee

The Interim Meeting Committee met earlier last year to plan our program for the 1973 Interim Meet-



ing. We felt our subjects to be timely, our speakers knowledgeable and persuasive, and felt our audience, although small, attentive and appreciative.

For the past two years, there has been much discussion about the Interim Meeting concerning the value received for funds expended. The KMA Board of Trustees requested the KMA Interim Meeting Committee to take a serious look at this year's statistics and bring a recommendation back to the Board as to whether or not the Interim Meeting should be continued.

Each year KMA brings in speakers and designs a program worthy of national recognition. This has been somewhat expensive with regard to transportation and lodging costs of guest speakers, not to mention the amount of staff time involved in planning and implementing the program. In addition, attendance has been poor for the last few years. Detailed records were kept at this year's Interim Meeting which registered only 40 physicians other than members of the Board, speakers, and other officials. Of this number, 15 were from the host medical society, leaving 25 doctors who came just for the meeting. We also learned that 83 of our 120 counties had no representative at all.

Taking this into consideration, the Interim Meeting Committee recommended that there be a temporary moratorium placed on the KMA Interim Meeting allowing the committee time to reassess current needs and future plans. It was felt that perhaps special programs on a certain timely subject could, at least temporarily, replace the Interim Meeting. These meetings would be put on as subjects of current interest arise, and would be planned and promoted in a much shorter time period than the Interim Meeting.

This recommendation was presented to the KMA Executive Committee on May 15, which accepted our recommendation that a moratorium be placed on the Interim Meeting and suggested to the Board that Interim Meetings be held in the future only when specifically requested by the Board.

I would like to thank the members of the Interim Meeting Program Committee for their time and efforts in planning this year's Interim Meeting. The Pennyriple Medical Society, which hosted the meeting, did a marvelous job for which I am very grateful.

Lee C. Hess, M.D., Chairman

#### **Recommendations, Reference Committee No. 6**

The Reference Committee reviewed the Report of the Interim Meeting Program Committee. The Committee Chairman, Lee C. Hess, M.D., and Charles G. Bryant, M.D. advised the reference committee regarding the poor attendance and the cost of this meeting. In view of this, the Interim Meeting Program Committee recommends a moratorium on the Interim Meeting. The KMA Trustees accepted this moratorium.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

## **Report of the McDowell House Board of Managers**

During the past year the Board of Managers of the McDowell House has met quarterly at the House in Danville. In the course of these meetings, the status of the restoration and its furnishings were inspected by the members of the Board. Constant small improvements have been made along with repairs which are necessary to protect the soundness of the House. It continues in remarkably good condition and is closely supervised by members of the Association, and the curators and hostesses in the House.

The House is open on a daily basis to the public and all visitors are given a complete story of Ephraim McDowell, his surgical contributions, and the items of unusual interest in the House itself. This makes the McDowell House a real contribution to education of the public, acts as a stimulus to the young, and adds satisfaction and understanding of the medical profession by the mature.

During the past year the most unusual accomplishment was that of the production of a documentary by WAVE-TV which was shown on December 24, 1972. The cost of showing the film was underwritten by the Kentucky Medical Association. Many compliments have come to the House in regard to this excellent presentation, which again has acted as an example of good public relations for the profession and as an educational contribution to the general public.

The financial situation of the House is sound at the moment with the support of the Kentucky Medical Association and various other medical societies and by contributions from the public in admission fees; also, many small items are sold to the public as mementos in the House. The financial status of the House is accurately accounted for by our resident secretary who monitors expenses on a day-by-day basis, readily visible to the Board of Managers and to the profession of the Kentucky Medical Association. It is the opinion of the Board that the House is in excellent condition and that continued efforts are indicated to raise funds for endowment of the House as an educational project in the years ahead.

Laman A. Gray, M.D., Chairman

#### **Recommendations, Reference Committee No. 6**

Reference Committee No. 6 reviewed the Report of the McDowell House Board of Managers.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

## **Report of the Memorials Commission**

The Memorials Commission did not meet during this Associational year.

Since the completion of the new addition to the KMA Headquarters Office, the Memorials Commission has been conducting memorial projects to help defray the cost of equipping the new meeting rooms.

Several officers, trustees, and former trustees have already contributed to this project during the 1972-73 Associational year.

The Commission was successful, with the fine assistance of J. Campbell Cantrill, M.D., Georgetown, at the very end of the previous Associational year, in securing a portrait of the first KMA President, William L. Sutton, M.D.

This year the KMA Annual Meeting will memorialize Arch Dixon, M.D., who served as the Association's President in 1893.

Eugene H. Conner, M.D., Chairman

#### **Recommendations, Reference Committee No. 6**

Reference Committee No. 6 next reviewed and accepted the Report of the Memorials Commission.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

### **Report of the Committee on Orientation**

The Committee on Orientation held one meeting on July 12, 1973, to plan the Orientation Program for the 1973 Annual Meeting.

In following the directives of the Board of Trustees, it was determined that the Orientation Program should, once more, be presented on a voluntary basis. The section of the Bylaws referring to mandatory Orientation has previously been eliminated.

There was additional discussion by the Committee regarding the possibility of KMA staff members continuing to attempt to visit new members of the Association whenever possible and making Orientation materials available while urging them to attend scientific sessions and House of Delegates meetings during the Annual Meeting.

The Committee is recommending the same general format that was used during the 1972 meeting and any future recommendations concerning Orientation Programs will not be made until the Board of Trustees has an opportunity to review the attendance at the 1973 Orientation Program.

Wyatt Norvell, M.D., Chairman

#### **Recommendations, Reference Committee No. 6**

The Reference Committee next reviewed the Report of the Committee on Orientation. The committee recommends acceptance of this report.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

### **Resolution E**

#### **Jefferson County Medical Society**

WHEREAS, Residents & Interns nationally have expressed interest in becoming involved actively in forming policy for the future of medicine which is their legacy; and

WHEREAS, a united organization of physicians nationally and locally is important in the face of

rapidly changing medical care delivery systems; and

WHEREAS, the large group of medical doctors serving as Residents & Interns are presently inadequately represented in the County Societies of Jefferson or Fayette and by the present KMA membership; and

WHEREAS, County Societies can follow the lead of the KMA in determining the best type membership for Residents and Interns. Twenty-four states now offer regular membership to Residents and Interns; and

WHEREAS, there are newly developed organizations seemingly dealing more directly with the desires and needs of these younger physicians than our County Societies, KMA, or AMA; therefore be it

RESOLVED that since Residents & Interns have interests in common with all physicians, a reasonable fair representation should be established within the County Societies, KMA, and AMA for their active membership, and be it further

RESOLVED that a new Trustee District, number sixteen (16), be established for Residents & Interns in training at institutions in both Jefferson & Fayette Counties or any other counties in the state. Although Residents & Interns would become active members in the county where they are in training they would be represented at the state level, KMA, by a new Trustee and Residents or Interns in the House of Delegates by the same proportionate number as for a County Society (i.e. one Delegate per 25 Residents or Interns) and be it further

RESOLVED, that a Resident or Intern must first be a member of the appropriate county medical society and the KMA before he can be represented by a duly elected Delegate to the KMA House of Delegates; and finally be it further

RESOLVED, that this matter concerning voting representatives in the KMA House of Delegates for Residents & Interns be referred to the Committee on Constitution and Bylaws in order that they might study and recommend the type of membership necessary for both the County Society and the KMA in order to accomplish the intent of this resolution.

#### **Recommendations, Reference Committee No. 6**

Reference Committee No. 6 next considered Resolution E introduced by the Jefferson County Medical Society regarding Residents and Interns Proportionate Representation in the KMA House of Delegates. There was considerable discussion regarding the importance of having input into the Kentucky Medical Association by the physicians in training in our state. The Reference Committee felt that in-depth study should be done regarding this representation.

The committee recommends approval of the WHEREASs in Resolution E and deletion of the RESOLVEDs. The Reference Committee further recommends that a substitute RESOLVED be added to the resolution to read as follows:

"RESOLVED, that the Kentucky Medical Association and component societies develop recommendations for the appropriate role and opportunity for students, interns, and residents in these organizations fol-



lowing consultation with representatives from these groups, and be it further

**RESOLVED**, that the KMA Board of Trustees bring its recommendations on this matter to the 1974 House of Delegates."

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

## **Report of the Committee to Study Abortion Guidelines**

Following the Supreme Court's ruling, a grand jury request and general public inquiry, we appointed a Committee to Study Abortion Guidelines. A preliminary report was presented to the Board of Health in July.

The committee has met on a number of occasions and, hopefully, the Board will have finalized its action on the committee's recommendations by the September 16 Board Meeting and the House can finalize our policy during the Annual Meeting.

### **Recommendations, Reference Committee No. 6**

Reference Committee No. 6 reviewed Paragraphs 2 and 3 on Page 12 of the Report of the Chairman, Board of Trustees.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

### **Addendum to Report No. 5, Chairman of the Board of Trustees**

#### **REPORT OF THE AD HOC COMMITTEE ON ABORTION GUIDELINES**

On January 23, 1973, the United States Supreme Court in two landmark cases established the right of women to terminate pregnancy by abortion. Because this decision was in contrast to current Kentucky Medical Association policy, the Board of Trustees appointed an ad hoc committee to recommend adjustments in KMA policy in order to maintain high standards of medical care and to safeguard the health of women undergoing abortion procedures.

The committee, therefore, feels that it is imperative to create a framework within which Kentucky women can receive abortion services in the Commonwealth with the assurance that the abortion procedure will be performed in safe medical settings which provide necessary ancillary services.

The committee takes full cognizance of the Supreme Court requirements that the state shall not interfere with the decision between a physician and his patient for or against abortion, nor use its powers to deny access to first trimester abortion services. The committee feels that abortions should be performed in a licensed hospital or in short stay facilities (or a doctor's office) that conform to the standards which were set up by the Board of Certificate of Need and Licensure of the Commonwealth of Kentucky for surgi-centers. A physician's office, if it meets the re-

quirements set up by the Board of Certificate of Need and Licensure for surgi-centers, could be the site for abortions in the first trimester.

Recent experiences with abortions in other states have led the committee to feel that all dilatation and curettage, including suction curettage, up to the tenth week of pregnancy, can be safely performed in such short stay treatment facilities, i.e., surgi-centers or a properly equipped physician's office. The committee feels strongly that abortions should be performed only by a qualified licensed physician who is permitted to do these procedures in a hospital setting. Major gynecological surgical procedures such as hysterotomy, vaginal tubal ligation, intra-amniotic hypertonic saline infusion, or other procedures that may be expected to result in the termination of pregnancy in the second or third trimester must be performed in a licensed hospital, but not necessarily on an in-patient basis, or in a short stay facility that conforms to the standards which were set up by the Board of Certificate of Need and Licensure for surgi-centers. These procedures should be performed only by someone who has special training in obstetrics and gynecology. In the third trimester a woman may have her pregnancy terminated only if her health or life is endangered by continuation of the pregnancy or in case of a proved fetal anomaly.

Criteria laid down by the Board of Certificate of Need and Licensure, or any other agency determining where abortions may be performed on an out-patient basis, must meet the following standards:

1. A permanent record must be kept for each patient.

2. It should include a pre-operative history and physical examination which is particularly directed to the identification of pre-existing or concurrent illnesses or drug sensitivities that may have a bearing on operative procedures or anesthesia.

3. A hematocrit and/or hemoglobin and Rh typing should be done on all patients and any other further laboratory work that would be indicated by the patient's medical history.

4. In the case of an unmarried pregnant minor seeking an abortion, the same rules should be applied in requiring the consent to the abortion of the person legally responsible for the minor as are followed in obtaining such consent for any medical operation.

5. Analgesia and anesthesia should accompany the procedure in accordance with generally established good medical practice.

6. There should be means to resuscitate and treat the unconscious patient and the patient with cardiovascular collapse.

7. It shall be the responsibility of the licensed physician performing an abortion to provide pre- and post-operative care in a traditional and continuing manner. This physician should operate under a transfer agreement insuring that any patient in whom complications develop will be accepted by a licensed hospital on an around the clock basis for emergency care.

8. Abortions should be done by standard and approved methods and recorded in the patient's record. Histologic examination of the tissues is not necessary

unless gross examination suggests a tissue abnormality, such as trophoblastic disease; although, such tissue examination would be desirable.

9. The presence of pregnancy should be confirmed by an appropriate and recognized test for gonadotropin by either immuno-assay or bio-assay methods. The pregnancy must also be confirmed by examination by a licensed physician.

10. Pre- and post-abortion counselling should be a part of the services offered. Counselling should include alternatives to abortion, possible psychological evaluation, and contraceptive and sterilization information.

11. Each facility must offer (but not require) tests for cervical carcinoma and venereal disease to each patient.

12. All Rh negative patients should be given Rh immune globulin following the surgical procedure in order to prevent Rh sensitization.

13. No hospital, physician, or employee should be compelled to participate in abortions.

14. For the sake of clarity, the following definitions were agreed upon by the committee:

- A. Abortion—Termination of pregnancy in which the delivery of a live infant is not anticipated.
- B. Viability is the ability of the fetus to sustain life outside the uterus with usual measures after the 20th week of pregnancy.
- C. First trimester begins with the first day of the last menstrual period and ends 12 weeks later.
- D. Second trimester begins at the 13th week after the onset of the last menstrual period and goes through the 24th week.
- E. Third trimester is from the 25th week until delivery.

The Board of Trustees met on Thursday, August 30, and considered this report.

**BOARD ACTION:** The Board of Trustees accepts this report and recommends its approval to the House of Delegates.

#### **Recommendations, Reference Committee No. 6**

The Reference Committee next considered the Report of the Ad Hoc Committee on Abortion Guidelines, and there was discussion of this section of the report. The amendment to the report of the Ad Hoc Committee was discussed and spirited exchange occurred. The committee carefully considered the information received and felt that the amendment was necessary and proper.

The committee and audience then considered the criteria regarding abortions on an out-patient basis outlined by the Ad Hoc Committee. Several KMA members emphasized the importance of the counseling requirement, and several took issue with number 8 and (a) under number 14. The committee recommends that number 8 be changed to read "Abortions should be done by standard and approved methods and recorded in the patient's record. Histologic examination of the tissues is necessary." The committee recommends number 14a be changed to read as follows:

"Abortion—Termination of pregnancy prior to the 20th week or before viability."

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

## **Resolution C**

### **Campbell-Kenton County Medical Society**

WHEREAS, that the following provisions were motivated by the legislative intrusion of the United States Supreme Court by virtue of its decisions removing the protection afforded the unborn, this resolution was necessitated. Now, therefore, be it

RESOLVED, that this resolution is in no way to be construed as implementing, condoning, or approving abortions at any stage of unborn human development but is rather an expression of determination of the House of Delegates of the Kentucky Medical Association to provide protection for the life of the unborn child whenever possible until such protection can be afforded by an appropriate amendment to the United States Constitution, and be it further

RESOLVED, that the members of the House expressly deplore the destruction of unborn human lives which have and will occur in Kentucky as a consequence of the Supreme Court's decision on abortion and hereby reiterate the historic commitment of the medical profession and this organization to preservation of all life, and be it further

RESOLVED, that it is in the interest of the people of the State of Kentucky that every precaution be taken to insure the protection of every viable unborn child being aborted, and every precaution be taken to provide life supportive procedures to insure the unborn child its continued life after its abortion, and be it further

RESOLVED, that currently, in this State there are grossly inadequate legal remedies to protect the life, health, and welfare of pregnant women and unborn human life, and be it further

RESOLVED, that it is in the interest of the people of the State of Kentucky to maintain accurate statistical data to aid in providing proper maternal health regulations, and be it further

RESOLVED, that abortion on demand should be addressed and discouraged at any time and forbidden, certainly after the stage of viability and probably at the start of the 13th week, and be it further

RESOLVED, that after the stage of viability abortion must be limited to those situations in which the life of the mother is jeopardized, and be it further

RESOLVED, that any live infant must be accorded the same rights and the same care that would be given to an infant delivered by more traditional means, and be it further

RESOLVED, that the practice of using fetuses as experimental material is condemned as in the Helsinki Studies using fetus heads for drug profusion experiments, and be it further

RESOLVED, that no hospital, clinic, institution, or any other facility in this State should be required to admit any patient for the purpose of performing an abortion, nor required to allow the performance of an



abortion; that no cause of action shall arise against any hospital, clinic, institution, or any other facility for refusing to perform or allow an abortion, and be it further

RESOLVED, that no person shall be required to perform or participate directly or indirectly in any abortion, and the refusal of any person to participate in an abortion shall not be a basis for civil liability to any person. No hospital, governing board, or any other person, firm, association, or group shall terminate the employment or alter the position of, prevent or impair the practice or occupation of, or impose any other sanction or otherwise discriminate against any person who refuses to participate in an abortion, and be it further

RESOLVED, that the Bureau of Vital Statistics, Department of Health, shall establish an abortion reporting form, which shall be used for the reporting of every abortion performed or prescribed in this State. Such form shall include the following items in addition to such other information as may be necessary to complete the form:

- (1) The age of the pregnant woman;
- (2) The marital status of the pregnant woman;
- (3) The location of the facility where the abortion was performed or prescribed;
- (4) The type of procedure performed or prescribed;
- (5) Complications, if any;
- (6) The name of the attending physician;
- (7) The name of the referring physician, agency, or service, if any;
- (8) The pregnant woman's obstetrical history regarding previous pregnancies, abortions, and live births;
- (9) The stated reason or reasons for which the abortion was requested;
- (10) The state and county of the pregnant woman's legal residence; and
- (11) The length and weight of the aborted child when measurable.

## Resolution D

### Campbell-Kenton County Medical Society

WHEREAS, the American Medical Association meeting in New York in June 1973, adopted Report: P of its Board of Trustees; and

WHEREAS, Report: P requires all physicians regardless of their individual moral convictions to obtain Rubella HAI tests on all pregnant patients as a possible first step toward abortion if rubella should occur; now therefore be it

RESOLVED, that the KMA delegates to the AMA be instructed to include the following resolution at the AMA Clinical Meeting in Anaheim in December 1973.

### Background Statement

AMA Board of Trustees Report: P (A-73) was adopted by the House of Delegates in spite of a Reference Committee recommendation for further study. Report: P deals with rubella immunization and in the

portion of the Report prepared by the American College of Obstetricians and Gynecologists and the National Council of Obstetrics—Gynecology alludes to abortion for maternal rubella. The abortion statement is not totally in accord with previous action of the House which was re-affirmed by the House (A-73) just after Report: P was adopted. This apparently places the house in a position supporting contradictory statements.

Now therefore be it

RESOLVED, that the House hereby reconsiders Board of Trustees Report: P (A-73) which is in conflict with other Association policy; and be it further

RESOLVED, that previous approval of the section titled, *Statement on Rubella Vaccination and Control of Rubella Virus Infection in Women of Childbearing Age* prepared by the American College of Obstetricians and Gynecologists and the National Council of Obstetrics—Gynecology in Report: P (A-73) is hereby rescinded; and be it further

RESOLVED, that the section headed *Rubella Vaccines* prepared by the American Academy of Pediatrics in Report: P, Board of Trustees is hereby adopted; and be it further

RESOLVED, that this House indicates to the American College of Obstetricians and Gynecologists and the National Council of Obstetrics—Gynecology its desire to incorporate its recommendation concerning administration of rubella vaccine to women of childbearing age provided that Section D and H be restated and reconciled with existing Association policy which in part states that no "... physician ... shall be required to perform any act violative of personally held moral principles."

## Resolution H

### KMA Board of Trustees

WHEREAS, in January, 1973, the Supreme Court of the United States adopted an opinion that was tantamount to a declaration of unconstitutionality for Kentucky's existing abortion law, KRS 436.020, and

WHEREAS, the Attorney General of the Commonwealth has interpreted this action of the Supreme Court to dictate that States can no longer legally prohibit abortions performed by physicians during the first trimester of pregnancy, and

WHEREAS, the Attorney General also stated that physicians cannot prohibit, but may regulate, abortion procedures in ways reasonably related to maternal health during the second trimester; and may prohibit abortions during the third trimester except when judged necessary for the preservation of the life or health of the pregnant woman, and

WHEREAS, the Kentucky Medical Association does not possess nor does it seek the right of immunity to the laws of this nation or the Commonwealth of Kentucky, and

WHEREAS, it has and always will abide by the law of the land, now therefore be it

RESOLVED, that the official position of this organization in relation to the question of abortion is,

therefore, to support legislation which will conservatively and rigidly implement the Supreme Court decision including prohibition of abortion subsequent to viability of the fetus, except when judged necessary for the preservation of the life or health of the pregnant woman, and be it further

RESOLVED, that KMA adopt the medical guidelines for abortion procedures which are necessary for the protection of human life but not in violation of the rights of people as determined by our nation's highest judicial body.

#### Recommendations, Reference Committee No. 6

The Reference Committee next considered Resolution H, Position Statement on Abortion, introduced by the KMA Board of Trustees; and Resolution C, Abortion Policy, and Resolution D, AMA Rubella Policy, both introduced by the Campbell-Kenton County Medical Society. The subject of these resolutions was KMA abortion policy. An interesting discussion ensued regarding these resolutions and from this discussion, the Reference Committee obtained considerable pertinent information regarding the feelings of the members of the Kentucky Medical Association present. The committee felt that none of these resolutions alone conveyed the feeling of the majority of members of the Kentucky Medical Association as a policy on abortion.

Resolution D dealt with AMA rubella vaccination policy, and discussion in the committee indicated that the AMA position is probably correct. The committee disapproves all of these resolutions and submits a substitute resolution containing pertinent parts of Resolutions C and H as follows:

"WHEREAS, that the following provisions were motivated by the decision of the United States Supreme Court relative to abortion, this resolution was necessitated. Now, therefore, be it

RESOLVED, that this resolution is in no way to be construed as implementing, condoning, or approving abortions at any stage of unborn human development but is rather an expression of determination of the House of Delegates of the Kentucky Medical Association to provide protection for the life of the unborn child whenever possible, and be it further

RESOLVED, that after the stage of viability, termination of pregnancy must be limited to those situations in which the life of the mother is jeopardized or a proven fetal anomaly exists, and be it further

RESOLVED, that any live infant must be accorded the same rights and the same care that would be given to an infant delivered by more traditional means, and be it further

RESOLVED, that the practice of using fetuses as experimental material is condemned, and be it further

RESOLVED, that no hospital, clinic, institution, or any other facility in this state should be required to admit any patient for the purpose of performing an abortion nor required to allow the performance of an abortion, and be it further

RESOLVED, that no person should be required to perform or participate directly or indirectly in an

abortion procedure. No hospital, governing board, or any other person, firm, association, or group should terminate the employment or alter the position of, prevent or impair the practice or occupation of, or impose any other sanction or otherwise discriminate against any person who refuses to participate in an abortion procedure, and be it further

RESOLVED, that the Bureau of Vital Statistics, Department of Health, shall establish an abortion reporting form, which shall be used for the reporting of every abortion performed or prescribed in this State. Such forms shall include the following items in addition to such other information as may be necessary to complete the form:

- (1) The age of the pregnant woman;
- (2) The marital status of the pregnant woman;
- (3) The location of the facility where the abortion was performed or prescribed;
- (4) The type of procedure performed or prescribed;
- (5) Complications, if any;
- (6) The pregnant woman's obstetrical history regarding previous pregnancies, abortions, and live births;
- (7) The stated reason or reasons for which the abortion was requested;
- (8) The state and county of the pregnant woman's legal residence."

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded.)

It was brought to the delegates' attention that the following RESOLVED had been omitted from the printed copy of the substitute resolution and should be inserted between the first and second RESOLVEDs.

"RESOLVED, that abortion on demand be discouraged at any time, and be it further"

Doctor William VonderHaar of Louisville moved to delete the word "shall" in the last RESOLVED and insert the words "we recommend."

(The motion was seconded and carried.)

The Reference Committee recommendation was accepted as amended.

Mr. Speaker, I move the adoption of the Report of Reference Committee No. 6 as a whole.

(Motion was seconded and carried.)

Mr. Speaker, I would like to thank the Chairmen of the various committees who were present during the reference committee hearing and the KMA members who attended the hearing and contributed to our knowledge. I would like to thank the members of Reference Committee No. 6—Doctor James R. Barnes, Doctor Terrell D. Mays, Doctor Wally O. Montgomery, Doctor Robert E. Smith, and Mr. Carl Wedekind for his legal assistance. I would particularly like to thank our secretary, Miss Karen Browning.

#### REFERENCE COMMITTEE NO. 6

James L. Ferrell, M.D., Paris, Chairman  
James R. Barnes, M.D., Louisville  
Terrell D. Mays, M.D., Elizabethtown  
Wally O. Montgomery, M.D., Paducah  
Robert E. Smith, M.D., Covington



## Unfinished Business

Doctor Cooper recognized Robert N. McLeod, Jr., M.D., Chairman of the Board of Trustees, for the final report of the Board which read as follows:

The KMA Bylaws provide that the Judicial Council be composed of five members. Four of these members to be elected by the House of Delegates with terms staggered so that one member will be elected each year. The KMA Secretary, who is elected by the House, automatically serves as a member of the Council.

According to the Bylaws, Chapter VII, Section 1, "to be eligible for membership on the Judicial Council, a nominee shall possess at least one of the following qualifications: (1) Have served one term as an officer, trustee, or as Delegate to the AMA, or (2) Have served five years as a member of the House of Delegates."

The Bylaws provide that the Board of Trustees shall nominate at least one candidate for each vacancy and that additional nominations may be made from the floor.

Since the Board of Trustees appointed the current Judicial Council members after the last meeting of the House of Delegates, the Board has requested that a full slate of council members be presented to the House this year for confirmation. The following have been nominated by the Board for terms as indicated:

	TERM
J. Campbell Cantrill, M.D., Georgetown	1 year
E. C. Seeley, M.D., London	2 years
Samuel D. Weakley, M.D., Louisville	3 years
James O. Willoughby, M.D., Bowling Green	4 years
S. Randolph Scheen, M.D., Louisville	Secretary

Doctor McLeod moved these physicians be elected for the terms indicated. Motion was seconded and carried.

## Election of Officers

Vice-Speaker Cooper called on Glenn W. Bryant, M.D., Louisville, Chairman of the Nominating Committee, for his report. Doctor Bryant read the following list of nominations for the positions noted:

President-Elect (Central)	Hoyt D. Gardner, M.D. Louisville
Vice-President (Western)	Gabe A. Payne, M.D. Hopkinsville

AMA Delegates (2)	John C. Quertermous, M.D. Murray
	David B. Stevens, M.D. Lexington
AMA Alternate Delegates (2)	William W. Hall, M.D. Owensboro
	Thomas L. Heavern, Jr., M.D. Highland Heights

No additional nominations were received from the floor; therefore, it was moved and seconded that the nominees be elected. Motion carried.

Doctor Gardner was then escorted to the podium and received a standing ovation.

Doctor Bryant then submitted the following nominations for the office of trustee and alternate trustee on behalf of the district nominating committees:

Second District	Charles C. Kissinger, M.D. Henderson
Alternate	Kenneth M. Eblen, M.D. Henderson
Seventh District	John P. Stewart, M.D. Frankfort
Alternate	William H. Keller, M.D. Frankfort
Ninth District	James L. Ferrell, M.D. Paris
Alternate	Don R. Stephens, M.D. Cynthiana
Tenth District	David A. Hull, M.D. Lexington
Alternate	Irving Kanner, M.D. Lexington
Thirteenth District	J. Wesley Johnson, M.D. Ashland
Alternate	Arthur B. Richards, M.D. Louisa

The Nominating Committee for the Eleventh District asked for more time to confer before submitting their nomination due to insufficient representation from their district at the meeting. This request was granted.

There being no additional nominations from the floor, the above-named nominees were elected.

## Nominations for Kentucky Physicians Mutual, Inc. Board of Directors

The following list of nominees for the Board of Directors, Kentucky Physicians Mutual,

Inc., was submitted and received for information only:

Walter Johnson, M.D., Paducah  
E. S. Kimbel, M.D., Frankfort  
Lee C. Hess, M.D., Florence  
W. K. Massie, Jr., M.D., Lexington  
William P. McElwain, M.D., Frankfort  
George W. Pedigo, M.D., Louisville  
David A. Hull, M.D., Lexington  
Robert Bateman, M.D., Danville  
Bob Hall, M.D., Paintsville  
Eugene Sloan, M.D., Paducah  
E. C. Seeley, M.D., London

#### **Election of 1974 Nominating Committee**

The following physicians were elected by the House of Delegates to serve as the Nominating Committee for the 1974 Annual Meeting:

Leslie W. Blakey, M.D., Lexington  
Peter P. Bosomworth, M.D., Lexington  
W. Neville Caudill, M.D., Louisville  
Wyatt Norvell, M.D., New Castle  
Jim B. Tolliver, M.D., Whitesburg

At this time, Doctor Cooper called on Doctor Rainey for a few brief remarks as the new President of KMA.

Doctor Scheen announced that the Board of Trustees would hold its reorganizational meeting on Thursday, at noon, in the Majestic-New Orleans Rooms in the Convention Center. All newly elected Board members were urged to attend.

Doctor Cooper adjourned the second session of the 1973 KMA House of Delegates at 10:40 p.m. and thanked the members for their participation.

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**Complete**  
**KMA Guidelines on Abortion**  
**to be**  
**Special Feature**  
**of**  
**January, 1974 Issue of**  
***The Journal***



# 1973 CONSTITUTION AND BYLAWS OF THE KENTUCKY MEDICAL ASSOCIATION

Revised September 19, 1973

## CONSTITUTION

- Article I. Name of the Association
- Article II. Purpose of the Association
- Article III. Component Societies
- Article IV. Composition and Meetings of the Association
- Article V. Officers
- Article VI. House of Delegates
- Article VII. Districts, Sections and District Societies
- Article VIII. Board of Trustees
- Article IX. Funds and Expenses
- Article X. Referendum
- Article XI. The Seal
- Article XII. Amendments
- Article XIII. Definitions

### Article I. Name of Association

The name and title of this organization shall be the Kentucky Medical Association.

### Article II. Purpose of the Association

The purpose of the Association shall be to federate and bring into compact organization the entire medical profession of the State of Kentucky and to unite with similar associations in other states to form the American Medical Association, with a view to the extension of medical knowledge; the advancement of medical science and charity; the evaluation of the standards of medical education; the enactment and enforcement of just medical laws; the promotion of friendly intercourse among physicians and the guarding and fostering of their material interests; the protection of the members thereof against unjust assaults upon their professional care, skill or integrity; and to the enlightenment and direction of public opinion in regard to the great problems of state medicine so that the profession shall become more capable and honorable within itself and more useful to the public in the prevention and cure of disease and in prolonging and adding comfort to life.

### Article III. Component Societies

Component societies shall consist of those medical societies which hold charters from this Association.

### Article IV. Composition and Meetings of the Association

The Association shall consist of the members of the component societies, but the House of Delegates shall have authority to adopt such bylaws regulating the admission and classification of members as it may deem advisable. The Association shall hold an Annual Meeting and such Special Meetings as may be called pursuant to the bylaws.

## Article V. Officers

Section 1. The officers of this Association shall be a President, a President-elect, a Vice President, a Secretary, a Treasurer, a Speaker and Vice Speaker of the House of Delegates, a Trustee and an Alternate Trustee from each district that may be established; and such other officers as may be provided for in the Bylaws.

Section 2. The eligibility, duties and terms of office of all officers of the Association shall be as prescribed in the Bylaws.

Section 3. All officers shall serve until their successors have been elected and installed.

Section 4. All officers shall be elected by the House of Delegates at its Regular Session and shall take office on the last day of the Annual Meeting.

## Article VI. House of Delegates

Section 1. The House of Delegates shall be the legislative body of the Association and shall have power, by a two-thirds vote of all the delegates present at that session, to adopt bylaws to carry out the provisions of this Constitution and to provide for the government of the Association in any other manner not inconsistent with this Constitution. It shall meet in Regular Session annually during the Annual Meeting of the Association, and may be called into Special Session under such conditions as may be prescribed in the bylaws.

Section 2. Delegates shall be members of and elected by component societies in such manner as may be provided in the bylaws. Officers of the Association, Delegates and Alternate Delegates to the American Medical Association, and the five immediate Past Presidents shall be ex officio members of the House of Delegates and entitled to vote.

Section 3. The House of Delegates shall elect a Speaker and a Vice-Speaker, one of whom shall preside during the meetings of the House of Delegates. The presiding officer shall not be entitled to a vote except in the event of a tie.

Section 4. The House of Delegates shall be the final judge as to the qualification of its members.

## Article VII. Districts, Sections and District Societies

The House of Delegates shall divide the state into Districts composed of one or more counties, for administrative purposes. It may also provide for a division of the scientific work of the Association into appropriate Sections, and for the organization of such District Societies, composed exclusively of members of component societies, as will promote the best interests of the profession.

## Article VIII. Board of Trustees

The House of Delegates shall make provision in the bylaws for a Board of Trustees composed of one Trustee from each District and such of the other officers of the Association as the House may deem

appropriate, which shall be charged with the general direction of the Association's affairs during the interim between meetings of the House. The House may delegate such powers to the Board of Trustees as are not specifically required by this Constitution to be exercised by the House, and may limit the Board's powers to such extent as it may determine to be necessary or desirable, provided, however, that in no event shall the Board of Trustees have power to commit the Association to any course of action which is contrary to or at variance with any policy established by the House of Delegates.

#### Article IX. Funds and Expenses

The House of Delegates shall provide funds for meeting the expenses of the Association by such methods and from such sources as it may select. Funds may be appropriated by the House of Delegates to defray the expenses of the annual session, for publications, and for such other purposes as will promote the welfare of the Association and the profession.

#### Article X. Referendum

The membership of the Association, by written petition signed by not less than 10% of the active membership, may obtain a referendum on any question pending before the House of Delegates. The Secretary, upon the presentation of such a petition to him shall cause the question to be submitted to the active membership by mail, and if a majority of the active members shall signify its approval or disapproval of a certain policy or course of action with respect to the question thus submitted, the will of the majority shall determine the question and shall be binding upon the House of Delegates and the Association upon certification of the result of the vote by the Secretary to the President and Board of Trustees.

#### Article XI. The Seal

The Association shall have a common Seal with power to break, change or renew the same at pleasure.

#### Article XII. Amendments

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the delegates registered at the Regular Session, provided that such amendment shall have been presented in open meeting at the previous regular session, and that it shall have been sent officially to each component county society at least two months before the session at which final action is to be taken.

#### Article XIII. Definitions

Whenever used in this Constitution, the Articles of Incorporation or the Bylaws—

(a) "County society," "component county society," or "component medical society" means "component society."

(b) "Annual Meeting" means the annual three-day meeting of the Association.

(c) "Scientific Sessions" mean those sessions during the Annual Meeting at which scientific subjects are programmed and discussed.

(d) "Regular Session" means the regular session of the House of Delegates which is held during the Annual Meeting.

(e) "Special Session" means a special, called meeting or session of the House of Delegates.

### BYLAWS

Chapter I.	Membership
Chapter II.	Annual and Special Meetings of the Association
Chapter III.	The House of Delegates
Chapter IV.	Election of Officers
Chapter V.	Duties of Officers
Chapter VI.	Board of Trustees
Chapter VII.	Discipline—The Judicial Council
Chapter VIII.	Standing Committees and Councils
Chapter IX.	Assessments and Expenditures
Chapter X.	Rules of Conduct
Chapter XI.	Rules of Order
Chapter XII.	County Societies
Chapter XIII.	Amendments

#### CHAPTER I. MEMBERSHIP

Section 1. Membership in this Association shall be coterminous with membership in a component county society. No physician shall be eligible for membership in this Association unless he is a member, in good standing of a component society, nor may he maintain membership in a component county society unless he is a member, in good standing of this Association.

When a physician who meets the qualifications hereinafter set forth, is certified to the Secretary as a member in good standing of a component society, properly classified as to type of membership, and when the dues pertaining to his membership classification have been received by the Secretary of the Association, the name of the member shall be included in the official roster of the Association and he shall be entitled to all the privileges of his class of membership. Provided, however, that members in good standing from other state societies may, if admitted to membership by a component society, be accepted by KMA for membership without paying dues for the remainder of the calendar year in which the transfer is made. Provided further, that the Board of Trustees shall have power, upon written application, approved annually by the county society of which the applicant is a member, to excuse any member from the payment of dues because of financial hardship. And provided further, that the Judicial Council, after a hearing, shall have power to condition membership in this Association upon the physician's agreement to limit the scope of his practice in any manner reasonably calculated to protect the public from the adverse effects of any demonstrated frailty or disability of said member.

Section 2. Membership in the Association shall be divided into nine classes, to-wit: Active, Emeritus, In-Training, Associate, Inactive, Student, Service, Honorary and Special.

(a) Active Members. The active membership of the Association shall consist of the active members of the various component medical societies. To be eligible for active membership in any component society, the applicant must be a physician who holds an unrestricted or limited license to practice medicine and surgery in this state, and who is of good moral, ethical and professional standing. Nothing contained herein shall prevent a component society from requiring new members to occupy provisional status for a reasonable time after their admittance to membership under any classification.



(b) **Emeritus Members.** Component societies may elect as a member-emeritus any doctor of medicine or osteopathy who has served his profession with distinction and who has either reached the age of 70 or has retired from active practice. Emeritus members shall have the right to vote and be entitled to the benefits of Chapter VI, Section 8 of these Bylaws, but shall not pay dues. They shall receive *The Journal* and other publications of the Association.

(c) **In-Training Members.** Interns, residents, and teaching fellows who are doctors of medicine or osteopathy and who have complied with all pertinent regulations of the State Board of Health. In-training members shall have the right to vote and receive all publications of the Association, but shall not be counted in determining the number of delegates to which their county society is entitled in the House of Delegates.

(d) **Associate Members.** The associate membership of the Association shall consist of the associate members of the various component medical societies. To be eligible for associate membership in any component society, the applicant must qualify under one or more of the following groups:

(1) Medical officers of the United States Army, Navy, Air Force, Veterans Administration, Public Health Service, or other federal governmental service while on duty in the State.

(2) Osteopathic physicians who practice allopathic medicine.

Associate members shall not have the right to vote nor to hold office, but shall receive the *Journal* and other publications of the Association.

(e) **Inactive Members.** The inactive membership of the Association shall consist of the inactive members of the various component county societies. Any doctor of medicine licensed to practice medicine in Kentucky who is not engaged in the practice of medicine but who is otherwise eligible for active membership in the Association may be admitted to inactive membership by any component county society. Inactive members shall not have the right to vote nor hold office, but shall receive the *Journal* and other publications of the Association.

(f) **Student Members.** Any student in an accredited medical school in Kentucky or any resident of Kentucky who is a student in any accredited medical school in the United States shall be eligible for student membership. Student members shall not have the right to vote nor hold office. They may apply directly to the State Association for membership and be assigned to the county society of their choice. The membership year for student members shall run from September 1 to August 31 of each year.

(g) **Service Members.** Members of the Association in good standing who enter military service and are ineligible for Associate membership shall be classified as service members. Service Members shall not be required to pay dues. If a member in good standing enters service prior to April 1 and has paid his dues for that year, he shall receive all publications and other benefits applicable to his class of membership in the Association and shall owe no further dues until January 1 following his release. If a member in good standing enters service prior to April 1 without paying his dues for that year, he shall receive publications and other benefits but shall owe the dues applicable to his class of membership immediately following his release from active duty. Members whose dues have not been received by April 1 are not in good standing.

(h) **Honorary Members.** Any physician possessed of scientific attainments who is a member of a constituent state medical association and who has participated in the program of the scientific session and who is not a citizen of Kentucky may by unanimous vote of the House of Delegates be elected to honorary membership. Honorary members shall be entitled to the privileges of the floor in all scientific sessions.

(i) **Special Members.** Component societies may invite dentists, pharmacists, funeral directors, or other professional persons to become special members. Special members shall have no rights or obligations under these Bylaws, but may be accorded the privilege of attending and participating in the scientific meetings of the society, provided, however, that a registration fee may be required of special members who desire to attend the Annual Meeting of the Association.

**Section 3. Guests of Honor.** Any distinguished physician not a resident of this State may become a guest of honor during any Annual Meeting upon invitation of the Board of Trustees and shall be accorded the privilege of participating in all of the scientific work of that meeting.

**Section 4.** No person who is finally convicted of a felony subsequent to September 26, 1968, shall be eligible for membership in this Association unless and until, upon proper application to the Judicial Council, it is determined that he is morally and ethically qualified. Except as provided in Chapter VII, Section 4 of these Bylaws, no person who is under sentence of suspension or expulsion from any component society of this Association shall be entitled to any of the rights or benefits of membership of this Association.

## CHAPTER II. ANNUAL AND SPECIAL MEETINGS OF THE ASSOCIATION

**Section 1.** The Association shall hold its annual and special meetings at such times and places as may be determined by the House of Delegates.

**Section 2.** The Annual Meeting shall consist of one or more scientific sessions, at least two meetings of the House of Delegates, and such other gatherings as may be authorized by the Board of Trustees. Each scientific session shall be presided over by the President or in his absence or disability or at his request by the President-Elect or such officers as the Board of Trustees may direct. The entire time of the scientific sessions, as far as may be, shall be devoted to papers and discussions related to scientific medicine.

**Section 3.** The name of a physician upon the properly certified roster of members or list of delegates of a component society which has paid its annual assessment, shall be prima facie evidence of his right to register at any meeting of this Association.

**Section 4.** Each member in attendance at any meeting shall register indicating the component society of which he is a member. When his right to membership has been verified by reference to the roster of the society, he shall receive a badge which shall be evidence of his right to all privileges of membership at that meeting. No member or delegate shall take part in any of the proceedings of any meeting until he has complied with the provisions of this section.

### CHAPTER III. THE HOUSE OF DELEGATES

**Section 1.** The House of Delegates shall meet in Regular Session at the time and place of the Annual Meeting, and shall, insofar as is practicable, fix its hours of meeting so as to give delegates an opportunity to attend the scientific sessions and other proceedings. Provided, however, that if the business interests of the Association and profession require, the Speaker, with the consent of the Board of Trustees, may convene the Regular Session in advance of the Annual Meeting, and the House may remain in session after the final adjournment thereof.

**Section 2.** The House may be called into Special Session by the President with the approval of the Board of Trustees, and a special session shall be called by the President on the written request of delegates representing fifty or more component societies. The purpose of all special sessions shall be stated in the call, and all business transacted at any such special session shall be germane to the stated purpose.

**Section 3.** When a special session is called, the Secretary shall mail a notice of the time, place, and purpose of such meeting to the last known address of each delegate at least ten days before such session.

**Section 4.** The Speaker shall, by virtue of his office, be responsible for making all arrangements for all sessions, regular or special, of the House.

**Section 5.** The members of the House of Delegates shall be elected by the various component societies in the manner prescribed in Chapter XII of these Bylaws.

**Section 6.** In the event a component society is not represented at any meeting of the House, the Speaker shall consult with any officer of the component society who is in attendance and, with the approval of the Credentials Committee, may appoint any active member of such component society who is in attendance, as its alternate delegate. If no officer of such society is present, the Speaker may make the appointment without consultation, but with the approval of the Credentials Committee. All such appointments shall also be subject to the approval of the House.

**Section 7.** Forty per cent of the qualified delegates, as defined by Article VI of the Constitution, shall constitute a quorum and all of the meetings of the House shall be open to the members of the Association. The House shall have the right to go into executive session whenever in its judgment such action is indicated; except that active members of the Association shall have the right to attend all executive sessions.

**Section 8.** Each resolution introduced into the House shall be in writing and signed by the author and presented to the Secretary following its introduction. If the author be an individual member, it shall be signed by him. If the author be a group of members, it shall be signed by the authorized spokesman for that group. Immediately after the Delegate has introduced the Resolution, it shall be referred to the proper Reference Committee before action thereon is taken.

**Section 9.** No resolution shall be introduced in the first meeting of the House of Delegates by any member or group of members other than the Board of Trustees unless a copy thereof was furnished to the Headquarters Office at least seven days prior to its introduction. The only exception to this shall be that a resolution which has been signed by ten or more

members of the House of Delegates and of which there are sufficient printed copies to distribute to each member of the House of Delegates may be received for consideration by an affirmative vote of three-fourths of the members present and voting. No new business shall be introduced in the last meeting of the House without unanimous consent, except when presented by the Board of Trustees. All new business so presented shall require the affirmative vote of three-fourths of those delegates present and voting, for adoption.

**Section 10.** The House shall give diligent attention to and foster the scientific work and spirit of the Association, and shall constantly study and strive to make each Annual Meeting a stepping stone to further ones of higher interest.

**Section 11.** It shall consider and advise as to the material interests of the profession, and of the public in those important matters wherein the public is dependent upon the profession, and shall use its influence to secure and enforce all proper medical and public health legislation, and to diffuse information in relation thereto.

**Section 12.** It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same locality and shall continue these efforts until every physician in every county of the State who will agree to abide by the constitution, bylaws and other rules and regulations of the Association and the appropriate component society, has been brought under medical society influence.

**Section 13.** It shall encourage postgraduate work in medical centers as well as home study and research and shall endeavor to have the results of the same utilized and intelligently discussed in the county societies.

**Section 14.** It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and Bylaws of that body.

**Section 15.** It shall, upon application, provide and issue charters to county societies organized in conformity with the Constitution and Bylaws of this Association.

**Section 16.** The state shall be divided into the following districts:

No. 1—Ballard, Calloway, Carlisle, Fulton, Graves, Hickman, Livingston, McCracken, and Marshall.

No. 2—Davies, Hancock, Henderson, McLean, Ohio, Union, and Webster.

No. 3—Caldwell, Christian, Crittenden, Hopkins, Lyon, Muhlenberg, Todd, and Trigg.

No. 4—Breckinridge, Bullitt, Grayson, Green, Hardin, Hart, Larue, Marion, Meade, Nelson, Taylor, and Washington.

No. 5—Jefferson.

No. 6—Adair, Allen, Barren, Butler, Cumberland, Edmonson, Logan, Metcalf, Monroe, Simpson, and Warren.

No. 7—Anderson, Carroll, Franklin, Gallatin, Grant, Henry, Oldham, Owen, Shelby, Spencer, and Trimble.



No. 8—Boone, Campbell, and Kenton.

No. 9—Bath, Bourbon, Bracken, Fleming, Harrison, Mason, Nicholas, Pendleton, Scott, and Robertson.

No. 10—Fayette, Jessamine, and Woodford.

No. 11—Clark, Estill, Jackson, Lee, Madison, Menifee, Montgomery, Owsley, Powell, and Wolfe.

No. 12—Boyle, Casey, Clinton, Garrard, Lincoln, McCreary, Mercer, Pulaski, Rockcastle, Russell, and Wayne.

No. 13—Boyd, Carter, Elliott, Greenup, Lawrence, Lewis, Morgan, and Rowan.

No. 14—Breathitt, Floyd, Johnson, Knott, Letcher, Magoffin, Martin, Perry, and Pike.

No. 15—Bell, Clay, Harlan, Knox, Laurel, Leslie, and Whitley.

District meetings may be held as desired, and District Medical Associations may be organized as desired, according to the districts outlined above.

**Section 17.** It shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates and such committees may report to the House of Delegates in person, and may participate in the debate thereon.

**Section 18.** Except as provided in Chapter VI, Section 4, it shall approve all memorials and resolutions issued in the name of the Association before the same shall become effective.

**Section 19.** A digest of proceedings of the House of Delegates shall be published and distributed to the membership annually.

#### CHAPTER IV. ELECTION OF OFFICERS AND DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

**Section 1.** The President-Elect and the Vice President shall be elected for a term of one year, the President-Elect succeeding to the presidency at the expiration of his term as President-Elect. The Vice President shall be elected from the same general area in which the president resides. Delegates to the AMA and their alternates shall be elected for terms of two years. The Speaker of the House of Delegates, the Vice Speaker, the Secretary, and the Treasurer shall be elected for terms of three years, but no member shall be eligible for election to more than two consecutive full terms as Secretary or Treasurer. Trustees and their Alternates shall be elected for terms of three years and Trustees shall be limited to serving for not more than two consecutive full terms. The terms of the Trustees and their Alternates shall coincide and be so arranged that one-third of the terms expire each year, insofar as possible, provided, however, that nothing contained herein shall preclude an Alternate Trustee from serving two full terms as a Trustee. No member shall be eligible for the office of President, President-Elect, Vice President, Speaker or Vice Speaker of the House of Delegates, Trustee or Alternate Trustee who has not been an active member of the Association for at least five years.

**Section 2.** During the last meeting of the regular session of the House of Delegates, the Speaker of the House of Delegates shall submit to the members of the House of Delegates a list of ten names from which, by ballot, the House of Delegates shall select five members to serve as the Nominating Committee

for the next year. The five names receiving the most votes shall form the committee. The committee shall select one of its members as chairman at an organization meeting held during the Interim Meeting, or at some other appropriate place designated by the Board of Trustees at least four months before the Annual Meeting. The committee, in addition to such other meetings as it may choose to hold, shall schedule an open meeting immediately after the close of the first meeting of the House at each Annual Meeting. This open meeting shall be held in the meeting place of the House of Delegates, shall receive broad publicity, and those who have business to discuss with the committee shall have a hearing. Before noon of the following day, the committee shall post on a bulletin board near the entrance to the hall in which the Annual Meeting is being held, its nominations for each office to be filled, and shall formally present said nominations to the House at the time of the election. Additional nominations may be made from the floor by submitting the nominations without discussion or comment. Vacancies occurring on the Nominating Committee by virtue of death, resignation, or disability, shall be filled by appointment of the Speaker.

**Section 3.** The election of officers and delegates to the AMA and their alternates shall be held at the second meeting of the regular session of the House of Delegates.

**Section 4.** All elections shall be by secret ballot, and a majority of the votes cast shall be necessary to elect, provided, however, that when there are more than two nominees, the nominee receiving the least number of votes on the first ballot shall be dropped and the balloting shall continue in like manner until an election occurs.

**Section 5.** Any member known to have directly or indirectly solicited votes for, or sought any office within the gift of the Association shall be ineligible for any office for two years.

**Section 6.** The Delegates representing the counties in each District form the Nominating Committee for the purpose of nominating a Trustee and an Alternate Trustee for the District concerned. This committee shall hold a well-publicized meeting open to all active members of the District concerned who are in attendance at the Annual Meeting for the purpose of discussing the nomination of the Trustee and his Alternate to serve the District. Additional nominations may be made from the floor when the Nominating Committee makes its report to the House of Delegates.

#### CHAPTER V. DUTIES OF OFFICERS OTHER THAN TRUSTEES AND ALTERNATES

**Section 1.** Except as provided in Chapter II, Section 2 hereof, the President shall preside at all scientific sessions of the Association and shall appoint all committees not otherwise provided for. He shall deliver an annual address at such time as may be arranged and shall perform such duties as custom and parliamentary usage may require. He shall be the real head of the profession in the State during his term of office and so far as practicable, shall visit or cause to be visited on his behalf, the various sections of the State and assist the Trustees in building up the county societies and in making their work more practical and useful. He shall be reimbursed for his reasonable and necessary travel expense incurred in the performance of his duties as President.

**Section 2.** The President-Elect shall assist the President in visitation of county and other meetings. He shall become president of the Association at the next Annual Meeting following his election as president-elect. In the event of his death or resignation, or if he becomes permanently disqualified or disabled, his successor shall be elected by the House of Delegates and shall be installed as President of the Association at its next regular session.

**Section 3.** The Vice President shall assist the President in the discharge of his duties, and shall perform such other duties as may be prescribed by the Board of Trustees. In the event of a vacancy in the office of the President, the Vice President shall succeed to the office of the President.

**Section 4.** The President-Elect and the Vice-President, when acting for and in behalf of the President, may be reimbursed for their reasonable and necessary travel expenses incurred in the performance of their duties in such amounts as may be available out of the sum appropriated in the annual budget for traveling expenses.

**Section 5.** The Speaker of the House shall preside at all meetings of the House of Delegates. He shall appoint all committees of the House of Delegates with the approval of the House of Delegates. He shall be a non-voting member of said committees, and shall perform such other duties as custom and parliamentary usage may require.

**Section 6.** The Vice Speaker shall assume the duties of the Speaker in his absence and shall assist the Speaker in the performance of his duties. In the event of the death, disability, resignation, or removal of the Speaker, the Vice Speaker shall automatically become Speaker of the House of Delegates.

**Section 7.** The Secretary shall advise the Executive Director in all secretarial matters of this Association and shall act as the corporate secretary insofar as the execution of official documents or institution of official actions are required. He shall perform such duties as are placed upon him by the Constitution and Bylaws.

**Section 8.** The Treasurer shall demand and receive all funds due the Association, including bequests and donations. He shall, if so directed by the House of Delegates, sell or lease any real estate belonging to the Association and execute the necessary papers and shall, subject to such direction, have the care and management of the fiscal affairs of the Association. All vouchers of the Association shall be signed by the Secretary or the Executive Director and shall be countersigned by the Treasurer of the Association. Under unusual circumstances, when one or more of the above-named officials are not readily available, the President or the Chairman of the Board of Trustees is authorized to sign the vouchers, provided that in any event all vouchers of the Association shall bear a signature and a counter-signature. All five officials shall be required to give bond in an amount to be determined by the Board of Trustees. The Treasurer shall report the operations of his office annually to the House of Delegates, via the Board of Trustees, and shall truly and accurately account for all funds belonging to the Association and coming into his hands during the year. His accounts shall be audited annually by a certified public accountant appointed by the Board of Trustees.

#### CHAPTER VI. BOARD OF TRUSTEES

**Section 1.** The Board of Trustees shall be the executive body of the House of Delegates and between sessions of the House of Delegates shall exercise the powers conferred upon the House of Delegates by the Constitution and Bylaws. The Board of

Trustees shall consist of the duly elected Trustees and the President, the President-Elect, the Vice-President, the immediate Past-President, the Speaker, and Vice-Speaker of the House of Delegates, the Secretary, the Treasurer, and the Delegates to the American Medical Association. The Executive Committee of the Board of Trustees shall consist of the President, the Vice President, the President-Elect, the Secretary, the Chairman of the Board of Trustees, the Vice Chairman of the Board of Trustees, and two trustees to be elected annually by the Board of Trustees. A majority of the full Board, to-wit, 14, and a majority of the full Executive Committee, to-wit, 4, shall constitute a quorum for the transaction of all business by either body. Between sessions of the Board, the Executive Committee shall exercise all of the powers belonging to the Board except those powers specifically reserved by the Board to itself.

**Section 2.** The Board shall meet daily, or as required, during the Annual Meeting of the Association and at such other times as necessity may require, subject to the call of the Chairman or on petition of three Trustees. It shall meet on the last day of the Annual Meeting for reorganization and for the outlining of the work for the ensuing year. It shall, through its Chairman, make an annual report to the House of Delegates at such time as may be provided, which report shall include an audit of the accounts of the Treasurer and other agents of this Association and which shall also specify the character and cost of all the publications of the Association during the year, and the amounts of all other property belonging to the Association, or under its control, with such suggestions as it may deem necessary. By accepting or rejecting this report, the House may approve or disapprove the action of the Board of Trustees in whole or in part, with respect to any matter reported upon therein. In the event of a vacancy in any office other than that of President, the Board may fill the same until the annual election.

**Section 3.** Each Trustee shall be organizer, peace-maker and censor for his district. He shall hold at least one district meeting each year for the exchange of views on problems relating to organized medicine and for postgraduate scientific study. The necessary traveling expenses incurred by a Trustee in the line of his duties herein imposed may be paid by the Treasurer upon a proper itemized statement, but this shall not be construed to include his expenses in attending the Annual Meeting of the Association.

**Section 4.** The Board shall have the authority to communicate the views of the profession and of the Association in regard to health, sanitation, and other important matters, to the public and press.

**Section 5.** The Journal of the Kentucky Medical Association shall be the official organ of the Association and shall be published under the supervision of the Board. The Editor of the Journal shall be elected by the Board. All money received by the Journal or by any member of its staff on its behalf, shall be paid to the Treasurer on the first of each month. The Board shall provide for and superintend the publication and distribution of all proceedings, transactions, and memoirs of the Association, and shall have authority to appoint such assistants to the Editor as it deems necessary.

**Section 6.** All commercial exhibits during the Annual Meeting shall be within the control and direction of the Board.

**Section 7.** In the event of the death, resignation, removal or disability of a Trustee, between sessions of the House of Delegates, the Alternate Trustee shall succeed to the office of Trustee. In case of disability, the Alternate shall serve until the disability



is removed or the Trustee's term expires, and in the absence of the Trustee, the Alternate Trustee shall vote in his place and stead.

**Section 8.** The Association, upon the request of any member in good standing who is a defendant in a professional liability suit, will provide such member with the consultative service of competent legal counsel selected by the Secretary acting under the general direction of the Executive Committee. In addition, the Association may, upon application to the Board outlining unusual circumstances justifying such action, provide such member with the services of an attorney selected by the Board to defend such suit through one court.

**Section 9.** The Board shall employ an Executive Director whose principal duty shall be to carry out and execute the policies established by the House of Delegates and the Board. His compensation shall be fixed by the Board. The Executive Director shall act as general administrative officer and business manager of the Association and shall perform all administrative duties necessary and proper to the general management of the Headquarters Office, except those duties which are specifically imposed by the Constitution and Bylaws upon the officers, committees, councils and other representatives of the Association. He shall refer to the various elected officials all administrative questions which are properly within their jurisdiction.

He shall attend the Annual Meeting, the meetings of the House of Delegates, the meetings of the Board, as many of the committee and council meetings as possible, and shall keep separately the records of their respective proceedings. He shall, at all times, hold himself in readiness to advise and aid, so far as is possible and practicable, all officers, committees, and councils of the Association in the performance of their duties and in the furtherance of the purposes of the Association. He shall be allowed traveling expenses to the extent approved by the Board.

He shall be the custodian of the general papers and records of the Association (including those of the Treasurer) and shall conduct the official correspondence of the Association. He shall notify all members of meetings, officers of their election, and committees and councils of their appointment and duties.

He shall account for and promptly turn over to the Treasurer all funds of the Association which come into his hands. It shall be his duty to receive all bills against the Association, to investigate their fairness and correctness, to prepare vouchers covering the same, and to forward them to the Treasurer for appropriate action. He shall keep an account with the component societies of the amounts of their assessments, collect the same, and promptly turn over the proceeds to the Treasurer. He shall, within thirty days preceding each Annual Meeting, submit his financial books and records to a certified public accountant, approved by the Board, whose report shall be submitted to the House of Delegates.

He shall keep a record of all physicians in the State by counties, noting on each his status in relation to his county society, and upon request shall transmit a copy of this list to the American Medical Association.

He shall act as Managing Editor, or otherwise supervise the publication of *The Journal of the Kentucky Medical Association* and such other publications as may be authorized by the House of Delegates, under the guidance and direction of the Board.

He shall perform such additional duties as may be required by the House of Delegates, the Board, or the President, and shall employ such assistants as the Board may direct. He shall serve at the pleasure

of the Board, and in the event of his death, resignation, or removal, the Board shall have the power to fill the vacancy. From time to time, or as directed by the Board, he shall make written reports to the Board and House of Delegates concerning his activities and those of the Headquarters Office.

## CHAPTER VII. DISCIPLINE — THE JUDICIAL COUNCIL

**Section 1.** There is hereby created a Judicial Council composed of the Secretary of the Association and four members to be elected by the House of Delegates for terms of four years each. One member shall be elected from each of the traditional eastern, western, and central districts, and one member from the state at large. Members of the first Judicial Council shall be elected for terms of one, two, three, and four years, respectively so that thereafter, one member will be elected each year. The Council shall annually elect a chairman.

To be eligible for membership on the Judicial Council, a nominee shall possess at least one of the following qualifications: (1) Have served one term as an officer, trustee, or as Delegate to the AMA or (2) Have served five years as a member of the House of Delegates.

It shall be the duty of the Board of Trustees to nominate at least one candidate for each vacancy on the Judicial Council, but additional nominations may be made from the floor. Vacancies which occur between Regular Sessions of the House of Delegates, shall be filled by the Board of Trustees. No member, other than the Secretary, shall serve more than two consecutive terms.

**Section 2.** The Judicial Council shall be the Board of Censors of the Association. It shall be the final arbiter of all questions involving the right and standing of members, whether in relation to other members, to the component societies, or to this Association. All charges of breach of medical ethics brought before the House of Delegates shall be referred to the Judicial Council without discussion. A member who has been convicted of a felony or of any violation of the Medical Practice Act, or who violates any of the provisions of the constitution, bylaws, or any rule or regulation of this Association, or the Principles of Ethics of the American Medical Association shall be liable to censure, fine, suspension, or expulsion upon order of the Judicial Council. Provided, however, that if in addition to discipline by the Association, the Judicial Council shall be of the opinion that the offending member's license to practice medicine should be revoked, it shall report this to the Board of Trustees as a recommendation that the Board refer the matter to the State Board of Licensure for this purpose.

Suspension shall be for a specified period during which the member shall remain liable for the payment of dues but shall not be eligible to hold office, attend business meetings or otherwise participate in Associational activities at the county, district or state levels. Upon the expiration of the period of suspension, every suspended member shall be automatically restored to all of the rights and privileges of his class of membership unless the Judicial Council determines that his conduct during the period of suspension indicates that he is unworthy of such restoration, in which event his suspension may be extended or he may be expelled.

Upon the complaint of any member or aggrieved individual involved, the Judicial Council may initiate disciplinary proceedings against any member, and may intervene in or supersede county, individual trustee, or

district disciplinary proceedings, whenever in its sole judgment and opinion, a disciplinary matter is not being handled in an expeditious manner, and may render a decision therein. In all cases in which the Association, rather than a member or aggrieved individual, appears to be the real party in interest, the Judicial Council may refer the complaint to the Board of Trustees for a determination as to whether probable cause for disciplinary action exists. If the Board of Trustees resolves this question in the affirmative, it shall so charge the respondent, and a representative of the Board shall thereupon be responsible for presenting the evidence in support of such charge at any hearing held thereon.

In all proceedings of the Judicial Council, the due process requirements of reasonable notice and a full and fair hearing shall be observed. No recommended disciplinary decision of an individual trustee or any district grievance committee shall become effective unless and until approved by the Judicial Council.

**Section 3.** It shall consider all appeals from the recommended decisions of individual trustees and District Grievance Committees. In the case of appeals from the decisions of individual trustees, the Judicial Council may admit such oral or written evidence as in its judgment will best and most fairly present the facts, but all appeals from the recommended decisions of District Grievance Committees shall be considered on the record made before such committee. It shall be the duty of the Secretary to notify the parties with respect to its disposition of each case.

**Section 4.** The Judicial Council may hear appeals from the disciplinary orders of component societies. Provided, however, that such appeals shall be considered on the record made before the component societies.

**Section 5.** Efforts toward conciliation and compromise shall precede the hearing of all disciplinary cases, but the decision of the Judicial Council shall be final.

**Section 6.** Component societies are encouraged to create suitable disciplinary procedures which guarantee due process, and to dispose of all disciplinary problems which come to their attention. It is recognized, however, that it may not be feasible for some societies to do so, and the District Grievance Committees hereinafter created, are designed to meet the needs of county societies which are without a functioning grievance committee.

**Section 7.** The trustee of each district is hereby designated the chairman of his District Grievance Committee. The Judicial Council shall designate two additional trustees from districts adjoining that of the chairman, and the three trustees thus selected shall constitute the District Grievance Committee. All grievances which cannot be resolved by individual trustees, shall be referred to the local grievance committee or the district grievance committee for the district in which the respondent physician or county society resides.

**Section 8.** District Grievance Committees shall investigate every grievance coming to their attention, taking care that the physician complained of shall have ample opportunity to respond to the complaint. If, after careful investigation, the complaint appears to be without merit, the committee shall so report to the Judicial Council, including sufficient facts in its report to enable the Judicial Council to form its own conclusions.

If the District Grievance Committee's investigation indicates that the member may be a proper subject of disciplinary action, the committee shall,

upon reasonable notice, hold a hearing at which the complainant and the respondent shall be entitled to be represented by counsel, to present the testimony of witnesses in his behalf, and to cross-examine witnesses against him. All testimony shall be under oath and shall be recorded by a competent reporter at the expense of the Association, but shall not be transcribed unless and until an appeal is taken as hereinafter provided.

When all of the testimony has been heard and all evidence received, the committee shall make written findings and recommendations which it shall transmit to the Judicial Council, furnishing copies thereof to the parties.

**Section 9.** Any party aggrieved by the findings or recommendations of the committee, may, within 30 days, appeal to the Judicial Council. Appeals shall be taken by filing with the Secretary a copy of the entire record made before the District Grievance Committee (including a transcript of the testimony, procured at the appellant's expense) together with a written statement of appeal pointing out in detail wherein the committee has erred, and directing the attention of the Judicial Council to those portions of the transcript upon which he relies, provided, however, that the Judicial Council may extend the time in which the transcript must be filed, upon request made within the initial thirty-day period.

**Section 10.** The House of Delegates shall ratify or reject such interpretations of the principles of medical ethics as the Judicial Council may propose. The Council shall annually report to the House of Delegates any rulings that have universal application, and the House shall have the power to modify the prospective effect of such rulings as the circumstances dictate.

#### CHAPTER VIII. COMMITTEES AND COMMISSIONS

**Section 1.** The Board of Trustees shall have authority from time to time to appoint, fix the duties of, and abolish such standing committees and commissions as it deems necessary or desirable to assist it in carrying on the Association's activities in the fields of business and scientific meetings, medical education and hospitals, legislation, medical services, communications and public service, and governmental medical services.

**Section 2.** The Executive Committee shall serve as the nominating committee for all standing committee and commission appointments, but the trustees may make additional nominations. When the Executive Committee sits as such nominating committee, the President-Elect shall serve as Chairman.

**Section 3.** The President, with the advice and consent of the Chairman of the Board of Trustees, may appoint temporary, ad hoc committees to perform specified functions. All such committees shall expire at the end of the term of the President by whom appointed.

**Section 4.** No committee or commission shall have power or authority to fix or determine Associational policy or to commit the Association to any course of action, such powers being expressly reserved to the House of Delegates and the Board of Trustees.

#### CHAPTER IX. ASSESSMENTS AND EXPENDITURES

**Section 1.** The annual dues for membership in this Association shall be as follows: (1) Active Members \$130, except that the dues for new members entering practice for the first time shall be \$80 per year for the first three full years of practice; (2) Emeritus Members, no dues; (3) Associate



Members, \$10; (4) In-Training Members, \$10; (5) Inactive Members, \$10; (6) Student Members, \$1; (7) Service Members, no dues; (8) Special Members, no dues. Dues fixed by these Bylaws shall constitute assessments against the component societies. Unless otherwise instructed by the Board of Trustees (which may institute centralized billing) the Secretary of each component society shall forward its assessments together with its properly classified roster of all officers and members, list of delegates, and list of non-affiliated physicians of the county to the Secretary of this Association as of the first day of January each year.

**Section 2.** Unless otherwise provided by the Board of Trustees pursuant to Section 1 hereof, any component society which fails to pay its assessments, or make the report as required, on or before the first day of April in each year, shall be held as suspended and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association or of the House of Delegates until such requirements have been met.

**Section 3.** All motions and resolutions appropriating money shall specify a definite amount or so much thereof as may be necessary for the purpose, and must have prior approval of the Board of Trustees before they can become effective. No motion or resolution, the adoption of which would require a substantial expenditure of funds, shall be considered by the House of Delegates unless the funds have been budgeted or are provided by the motion or resolution.

#### CHAPTER X. RULES OF CONDUCT

The principles set forth in the Principles of Ethics of the American Medical Association, together with the Constitution and Bylaws of the Association and all duly adopted resolutions of the House of Delegates, shall govern the conduct of members in their relation to each other and to the public.

#### CHAPTER XI. RULES OF ORDER

The deliberations of this Association shall be governed by parliamentary usage as contained in the latest edition of Sturgis' Standard Code of Parliamentary Procedure, unless otherwise determined by a vote of its respective bodies.

#### CHAPTER XII. COUNTY SOCIETIES

**Section 1.** Except as provided in Section 3 of this Chapter, all county medical societies in this State which have adopted principles of organization not in conflict with this Constitution and Bylaws shall, upon application to the House of Delegates, receive a charter from and become a component part of this Association.

The House of Delegates shall have authority to revoke the charter of any component society whose actions are in conflict with the letter or spirit of this Constitution and Bylaws.

**Section 2.** As rapidly as can be done after the adoption of this Constitution and Bylaws, a medical society shall be organized in every county in the state in which no component society exists, and charters shall be issued thereto.

**Section 3.** Only one component society shall be chartered in any county. Membership in the component society thus created shall entitle the members thereof to all the rights and benefits of membership in the Kentucky Medical Association.

**Section 4.** In sparsely settled sections two or more component societies may join for scientific programs, the election of officers, and such other matters as they may deem advisable. The component societies thus combined shall not lose any of their privileges

or representation. The active members of each component society shall annually elect at least a Secretary and a Delegate for the transaction of its business with the Association.

Two or more adjacent component societies may also combine into one multi-county component society by adopting resolutions to that effect at special meetings called for that purpose on at least ten days' notice. Copies of the resolutions, certified as to their adoption by the Secretary of each society, shall be forwarded to the Headquarters Office. If approved by the Board of Trustees, the multi-county society shall thereupon be issued a charter, the consolidating county societies shall cease to exist and the multi-county society shall become a component society of this Association; provided, however, that the active members residing in each county comprising the multi-county society shall be entitled to elect a delegate or delegates to the House of Delegates, as if each such county constituted a component society within the meaning of Section 12 of this Chapter; and provided, further, that multi-county societies may elect, at large, one alternate delegate for each delegate to which it is entitled under this section and such alternate may serve in the absence of the delegate for whom he is the designated alternate.

**Section 5.** Each component society shall be the sole judge of the qualifications of its own members. All members of component societies shall be members of the Kentucky Medical Association and shall be classified in accordance with Chapter I, Section 2 of these Bylaws, provided, however, that no physician who is under suspension or who has been expelled shall thereafter, without reinstatement by the Board of Trustees be eligible for membership in any component society. Any physician who desires to become a member of the Kentucky Medical Association shall first apply to the component society in the county in which he resides, for membership therein. Except as hereinafter provided in Sections 6 and/or 8 of this chapter, no physician shall be an active member of a component society in any county other than the county in which he resides.

**Section 6.** Any physician who may feel aggrieved by the action of the component society of the county in which he resides, in refusing him membership, shall have the right to appeal to the Board of Trustees, which, upon a majority vote, may permit him to apply for membership in a component society in a county which is adjacent to the county in which he resides.

**Section 7.** When a member in good standing in a component society moves to another county in the State, his name, upon request, shall be transferred without cost to the roster of the component society into whose jurisdiction he moves, if he is admitted to membership therein.

**Section 8.** A physician whose residence is closer to the headquarters of an adjacent component society than it is to the headquarters of the component society of the county in which he resides, may, with the consent of the component society within whose jurisdiction he resides, hold membership in said adjacent component society.

**Section 9.** Each component society shall have general direction of the affairs of the profession in the county, and its influence shall be constantly exerted for bettering the scientific, moral and material conditions of every physician in the county. Systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

Upon reasonable notice and after a hearing, component societies may discipline their members by censure, fine, suspension or expulsion, for any breach of the Principles of Medical Ethics or any bylaw,

rule or regulation lawfully adopted by such societies or this Association. At every hearing, the accused shall be entitled to be represented by counsel and to cross-examine witnesses, and the society shall cause a stenographic record to be made of the entire proceedings. The stenographer's notes need not be transcribed unless and until requested by the respondent member.

Any physician aggrieved by the disciplinary action of a component society may, within ninety (90) days, appeal to the Judicial Council, whose decision shall be final. This appeal shall be in writing and shall point out in detail the errors committed by the county society. It shall be accompanied by a transcript of the proceedings before the county society, procured at appellant's expense, and the statement of appeal shall direct the attention of the Judicial Council to those portions of the transcript upon which he relies.

Any member who fails or refuses to comply with the lawful disciplinary orders of his component society shall, if such failure or refusal continues for more than thirty (30) days, be automatically suspended from membership, provided, however, that an appeal shall stay the suspension until a final decision is made by the Judicial Council.

The resignation of a member against whom disciplinary charges are pending or who is in default of the disciplinary judgment of his county society, a district grievance committee or the Board of Trustees shall not be accepted and no member who is suspended or expelled may be reinstated or readmitted unless and until he complies with all lawful orders of his component society and the Board of Trustees.

**Section 10.** Frequent meetings shall be encouraged and the most attractive programs arranged that are possible. Members shall be especially encouraged to do postgraduate and original research work, and to give the society the first benefit of such labors. Official positions and other references shall be unstintingly given to such members.

**Section 11.** At the time of the annual election of officers, each component society shall elect a delegate or delegates to represent it in the House of Delegates. The term of a delegate shall commence on the first day of the regular session of the House following his election, and shall end on the day before the first day of the next regular session, provided, however, that component societies may elect delegates for more than one term at any election. Each component society may elect one delegate for each 25 voting members in good standing, plus one delegate for one or more voting members in excess of multiples of 25, provided, however that each component society shall be entitled to at least one delegate regardless of the

number of voting members it may have and that each multi-county society shall be entitled to the same number of delegates as its component societies would have had. The secretary of the society shall send a list of such delegates to the Secretary of this Association not later than 45 days before the next Annual Meeting. It shall be the obligation of a component society which elects delegates to serve more than one year, to provide the KMA Headquarters Office with a certified list of its delegates each year.

**Section 12.** The secretary of each component society shall keep a roster of its members and a list of non-affiliated licensed physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. He shall furnish an official report containing such information upon blanks supplied him for the purpose, to the Secretary of the Association, on the first day of January of each year, or as soon thereafter as possible, and at the same time the dues accruing from the annual assessment are sent in. In keeping such roster the secretary shall note any change in the personnel of the profession by death or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

#### CHAPTER XIII. AMENDMENTS

**Section 1.** These bylaws may be amended at any session of the House of Delegates by a majority vote of the delegates present at that session, provided: (1) the amendment proposed is presented in writing to the delegates thirty days prior to the session, or, (2) the amendment is introduced in writing at a regular session of the House of Delegates and considered at the following session, the vote on said amendment having been postponed definitely for a period of at least one day.

**Section 2.** An amendment to or change in the bylaws may be proposed by a reference committee or by the Board of Trustees at the final session of the House of Delegates, but, not having been postponed definitely for a period of one day, requires a two-thirds vote.

**Section 3.** An amendment to these bylaws may be proposed in writing by an individual delegate at the final session of the House of Delegates. If such an amendment is proposed, the proposal will be postponed definitely and studied by the appropriate reference committee at that time, reporting their recommendation back to the House of Delegates before the final session is adjourned. Such an amendment having not been postponed definitely for a period of one day, requires a two-thirds vote.



# 1973-74 KMA Committees

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# Pinworm therapy is often a family affair



**Contraindications:** History of hypersensitivity to thiabendazole.

**Warnings:** If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.

**Precautions:** Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction,

patients should be carefully monitored.

**Adverse Reactions:** Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of live *Ascaris* in the mouth and nose. Hypersensitivity reactions



## INDICATION | DOSAGE SCHEDULE

MINTEZOL® (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infections. Dosages are weight related. For your convenience, the information in the weight-dose chart below is included in the full prescribing information and in the 1973 edition of PDR.

*The recommended maximum daily dose of MINTEZOL is 3 g (6 tablets).*

MINTEZOL should be given after meals if possible. Dietary restriction, complementary medications, and cleansing enemas are not needed.

The usual dosage schedule for all conditions is two doses per day. The size of the dose is determined by the patient's weight.

Weight-dose chart:

WEIGHT (lb)	EACH DOSE (g)	TABLETS
25	0.25	½
50	0.5	1
75	0.75	1½
100	1.0	2
125	1.25	2½
150 & over	1.5	3

The regimen for each indication follows:

INDICATION	REGIMEN	COMMENTS
Pinworm disease	Two doses per day for 1 day. Repeat in 7 days.  This regimen is designed to reduce the risk of reinfection.	If this is not practical, give 2 doses per day for 2 successive days.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses per day for 2 successive days.	A single dose of 20 mg/lb or 50 mg/kg may be employed as an alternative schedule, but a higher incidence of side effects should be expected.
Creeping eruption	Two doses per day for 2 successive days.	If active lesions are still present 2 days after completion of therapy, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses per day for 2 to 4 successive days according to the response of the patient.	The optimal dosage for the treatment of trichinosis has not been established.

\*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.

# Chewable Tablets<sup>500 mg</sup> Mintezol<sup>®</sup> (THIABENDAZOLE | MSD)



so easy to take  
everyone in the family  
can keep to the  
regimen you prescribe

include: fever, facial flush, chills, conjunctival injection, angioedema, anaphylaxis, skin rashes, erythema multiforme (including Stevens-Johnson syndrome), and lymphadenopathy.  
**Supplied:** Chewable tablets, containing 500 mg thiabendazole, in boxes of 36, strip packaged, individually foil wrapped; Suspension, containing 500 mg thiabendazole per 5 ml, in bottles of 120 ml.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., INC., West Point, Pa. 19486

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## acute arthritic inflammation...heat that freezes

In acute rheumatoid arthritis consider Tandearil. The anti-inflammatory action of Tandearil quickly helps reduce heat, pain, swelling, and stiffness. Results are usually seen in 3 or 4 days. Try it for a week when the symptoms defy aspirin control.

Remember that Tandearil is not a simple analgesic. It should not be used on patients responding to routine therapy. Before using, please read the prescribing information. It's summarized below.

## Tandearil® helps take the heat off oxyphenbutazone NF Geigy

Tablets of 100 mg.

**Important Note:** This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions (symptoms of blood dyscrasias); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

**Indications:** Acute gouty arthritis, rheumatoid arthritis, rheumatoid spondylitis.

**Contraindications:** Children 14 years or less; senile patients; history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia; history or presence of drug allergy; blood dyscrasias; renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema; stomatitis and salivary gland enlargement due to the drug; polymyalgia rheumatica and temporal arteritis; patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

**Warnings:** Age, weight, dosage, duration of therapy, existence of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against po-

tential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonyleurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

**Precautions:** The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

**Adverse Reactions:** This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia,

gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement.

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For complete details, including dosage, please see full prescribing information.

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# **It's time for action to defend the laws and regulations that protect your patients against drug substitution.**

**These professional and trade organizations are united in supporting antisubstitution statutes and regulations:**

The American Academy of Dermatology

The Board of Directors of the  
American Academy of Family  
Physicians

The Executive Board of the  
American Academy of Neurology

The Committee on Drugs of the  
American Academy of Pediatrics

The American College of Allergists

The Executive Committee of the  
American College of Obstetricians  
and Gynecologists

The Board of Regents of the  
American College of Physicians

The Board of Trustees of the  
American Dental Association

The Board of Trustees of the  
American Medical Association

The American Psychiatric Association

The Executive Committee of the  
National Association of Retail  
Druggists

The Board of Directors of the  
Pharmaceutical Manufacturers  
Association

The National Wholesale Druggists'  
Association





## Joint Statement on Antisubstitution Laws and Regulations

The purpose of this statement is to affirm the support of the participating organizations for the laws, regulations and professional traditions which prohibit the unauthorized substitution of drug products.

Traditionally, physicians, dentists and pharmacists have worked cooperatively to serve the best interests of patients. Productive cooperation has been achieved through mutual respect as well as a common concern for the ideals of public service. This mutual respect has been reflected, in part, by joint support over the years for the adoption and enforcement of laws and regulations specifically prohibiting unauthorized substitution and encouraging joint discussion and selection of the source of supply of drug products. The basic principles of medical, dental and pharmacy practice are thus utilized and preserved in the interest of patient welfare.

The antisubstitution laws have not obstructed enhancement of the professional status of pharmacy any more than they have in and of themselves guaranteed absolute protection from unsafe drugs, or freed physicians, dentists and pharmacists from their responsibilities to patients. As a practical matter, however, such laws and regulations encourage inter-professional communications regarding drug product selection and assure each profession the opportunity to exercise fully its expertise in drug usage, to the advantage of patients.

Physicians and dentists should be urged to increase the frequency and regularity of their contacts with pharmacists in selection of quality drug products, recognizing that

economies to patients can be improved through such communication, taking into account the patients' needs. The pharmacist's knowledge of the chemical characteristics of drugs, their mode of action, toxic properties and other characteristics that assist in making drug selection decisions should be utilized to the fullest extent practicable by physicians and dentists in serving their patients.

Since drug product selection entails knowledge derived from clinical experience, the physician's and dentist's roles in product selection remain primary and do not permit delegation of decisions requiring medical and dental judgments. A broader role in therapy will evolve for pharmacists as improved understanding and cooperation among the professions continue to grow.

There has been no evidence that there are convincing reasons to modify or repeal existing laws and regulations prohibiting the unauthorized substitution of another drug product for the one specified by a prescriber. It is our belief that such laws and regulations merit the joint support of the medical, dental and pharmaceutical professions and the pharmaceutical industry.

Add your opinion to the weight of other professionals and send it to your state assemblyman or legislator.

*Pharmaceutical Manufacturers Association  
1155 Fifteenth Street, N.W., Washington, D. C. 20005*





## Placidyl® (ETHCHLORVYNOL) Brief Summary

**Indications**—Placidyl (ethchlorvynol) is indicated as short-term hypnotic therapy in the management of insomnia.

**Contraindications**—Drug hypersensitivity and porphyria.

**Warnings**—Not recommended during the first and second trimester of pregnancy. Caution patients of possible combined exaggerated effects with alcohol, barbiturates, tranquilizers or other CNS depressants. Exaggerated effects might result in blurring of vision, paralysis of accommodation and profound hypnosis. Caution patients concerning driving a motor vehicle, operating machinery, or other hazardous operations requiring alertness after taking the drug. ADMINISTER WITH CAUTION TO PATIENTS WITH SUICIDAL TENDENCIES AND DO NOT PRESCRIBE LARGE QUANTITIES OF THE DRUG. Adjustment of the dosage of oral anticoagulants might be necessary when beginning ethchlorvynol therapy. This drug is not recommended for use in children. PLACIDYL HAS THE POTENTIAL FOR THE DEVELOPMENT OF PSYCHOLOGICAL AND PHYSICAL DEPENDENCE. INSTANCES OF SEVERE WITHDRAWAL SYMPTOMS, INCLUDING CONVULSIONS AND DELIRIUM CLINICALLY SIMILAR TO THOSE SEEN WITH BARBITURATES, HAVE BEEN REPORTED IN PATIENTS TAKING REGULAR DOSES AS LOW AS 1000 MG. PER DAY OVER A PERIOD OF TIME WHEN THE DRUG WAS SUDDENLY DISCONTINUED. PROLONGED ADMINISTRATION OF THE DRUG IS NOT RECOMMENDED. Addiction-prone patients or those who are likely to increase dosages of the drug on their own initiative should be observed for evidence of signs or symptoms which may indicate possible early withdrawal or abstinence symptoms. Signs and symptoms associated with withdrawal and abstinence include unusual anxiety, tremor, ataxia, slurring of speech, memory loss, perceptual distortions, irritability, agitation and delirium. Other less well defined signs and symptoms, not necessarily due to withdrawal and abstinence, may include anorexia, nausea or vomiting, weakness, dizziness, sweating, muscle twitching and weight loss. Abrupt discontinuance of Placidyl following prolonged overdosage may result in convulsions and delirium.

**Precautions**—Toxic amblyopia has been reported with long-term continuous use of ethchlorvynol. Permanent visual defects have been observed, although amblyopia has improved after discontinuation of the drug. Drug dosage should be limited for elderly and debilitated patients to the smallest effective amount. If pain is present, this drug should only be given if insomnia persists after pain is controlled with analgesics. Caution is advised in prescribing the drug for patients who are being treated with either MAO inhibitors or antidepressants. Transient delirium has been reported with the combination of Placidyl and amitriptyline. Drug dosage should be reduced if prescribed for patients receiving MAO inhibitors or antidepressants. Caution should be exercised in patients with impaired hepatic or renal function. Patients who respond unpredictably to barbiturates or alcohol, or who exhibit excitement and release of inhibition in association with such agents, may also react in this way to Placidyl. Rarely, patients may exhibit symptoms suggestive of an unusual susceptibility to the drug; such as prolonged hypnosis, profound muscular weakness, excitement, hysteria, or syncope without marked hypotension. Transient giddiness or ataxia may occur.

**Adverse Reactions**—Hypotension, nausea or vomiting, gastric upset, aftertaste, blurring of vision, dizziness, facial numbness, and allergic reaction typified by urticaria have been reported following Placidyl administration. Mild "hangover" and symptoms of mild excitation have occurred in some patients. There have been rare reports of cholestatic jaundice occurring in patients taking ethchlorvynol. A few cases of thrombocytopenia have been reported in patients receiving ethchlorvynol. 304431

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**Under the Supervision of the Board of Trustees**

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## 0.1 M.I.C.

### for three hours

Similar elongations occur regardless of antibacterial used.



## 1.0 M.I.C.

### for three hours

Similar midcell defects seen with increased antibacterial concentrations.



## 10 M.I.C.

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Similar spheroplast-like forms appear with high concentrations of the antibacterials.



E. coli + sulfamethoxazole



E. coli + tetracycline

## The Scanning Electron Microscope (SEM) reveals the effect

**The *in vitro* experiment.** These SEM photomicrographs were taken as part of a study exploring the effects of various antibacterials with different modes of action on the surface morphology of bacteria. The scanning electron microscope was used because of its ability to show three-dimensional views of organisms, enabling better definition and appreciation of surface morphology.

For this portion of the experiment, *E. coli* were exposed to the following agents: sulfamethoxazole, a chemical drug which acts by interference with para-

aminobenzoic acid utilization; tetracycline, which interferes with intracellular protein synthesis; and cephalothin and ampicillin, which are cell-wall-active drugs.

Strains of *E. coli*, each susceptible to the respective antibacterials, were exposed for 15, 30, 60, 120 and 180 minutes and 18 hours to several concentrations of each agent.

Following the 180-minute or three-hour exposures to the antibacterials at 0.1 M.I.C., 1.0 M.I.C. and 10 M.I.C., photoscans of the *E. coli* were taken. As shown above, regardless of the antibacterial agent used or its mode of action, the changes in surface morphology were remarkably similar... elongation at low drug concentrations, midcell defects at higher



# Three-Dimensional World of SEM



E. coli + cephalothin



E. coli + ampicillin

## Effect of certain antibacterials on bacterial surface morphology

concentrations and ultimate progression to spheroplast-like forms.<sup>1</sup>

**The interpretation.** "At present, the significance of these observations in clinical infection must be considered with caution, but it is hoped that these data will stimulate a reevaluation of present concepts of the nature and role of morphological variants of bacteria exposed to a variety of antibacterial factors."<sup>2</sup>

It should be noted that this information represents only *in vitro* research. No clinical significance can be drawn from this study concerning the effective-

ness of any of the agents discussed, as it is not possible to extrapolate *in vitro* data to humans. This information is presented to demonstrate the continuing research activities in the area of antibacterials, particularly modes of action and surface morphology.

<sup>1</sup>Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

<sup>2</sup>*Antimicrob. Agents Chemother.*, 1:164, 1972.

See next two pages for product information.

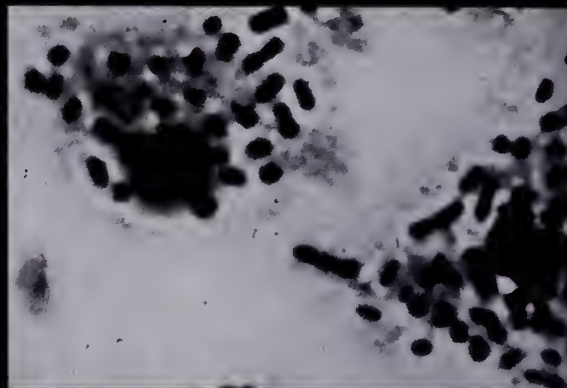


Roche Laboratories  
Division of Hoffmann-La Roche Inc  
Nutley, N.J. 07110

# Observations from



*E. coli*—Fluorescent stain



*Klebsiella* sp.—Stain to define capsular envelope

## ■ Effective control of primary susceptible bacterial offenders

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## ■ Prompt antibacterial blood and urine levels—in from 2 to 3 hours

Antibacterial levels of Gantanol usually appear in blood and urine in from 2 to 3 hours after the initial 2-Gm adult dose. This rapid initiation of effective antibacterial activity enables prompt treatment of certain nonobstructed urinary tract infections and may also help avert possible sequelae.

## ■ Around-the-clock coverage for 14 days

Mounting evidence in current medical literature suggests a minimum of 14 days' continuous therapy for certain urinary tract infections.\* Following the initial 2-Gm adult dosage of Gantanol, each 1-Gm dose provides up to 12 hours of antibacterial activity during the treatment period. When urinary tract infection is more severe, *t.i.d.* (q. 8 h.) dosage schedule may be required. Both regimens provide around-the-clock therapy, important because normal urinary retention during sleep tends to favor bacterial proliferation. It is also convenient for patients not to have to take middle-of-the-night medication.

## ■ Also effective in certain nonobstructed chronic and recurrent urinary tract infection

Nonobstructed urinary tract infections, such as cystitis or pyelonephritis—chronic and/or recurrent—develop more commonly in the elderly and debilitated, and response to Gantanol is often highly satisfactory.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note:** Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

**Contraindications:** Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

**Warnings:** Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-

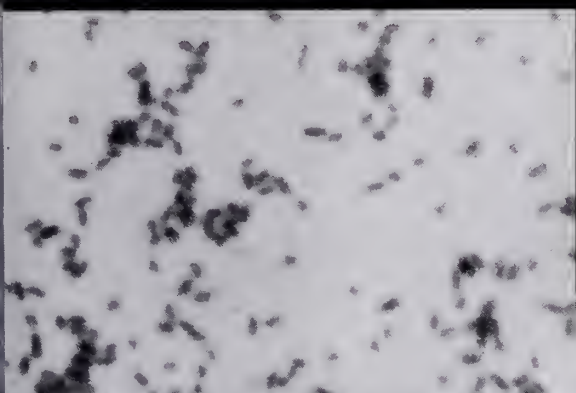
hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

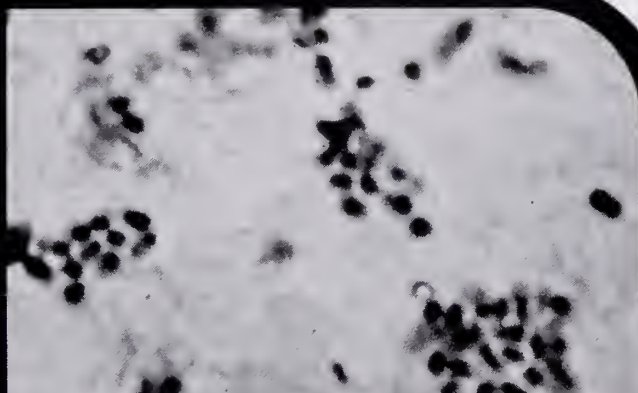
**Adverse Reactions:** Blood dyscrasias (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprolthrombinemia and methemoglo-



# clinical practice



*Enterobacter* sp.—Gram stain showing characteristic gram-negative rod



*Proteus mirabilis*—Flagella stain

## ■ Your option: tablets or suspension

Gantanol Tablets or the pleasant-tasting, cherry-flavored Suspension can provide dependable antibacterial activity to control susceptible nonobstructed cystitis and pyelonephritis. Symptomatic improvement usually may be expected to begin within 24 to 48 hours. Usual precautions with sulfonamide therapy should be observed, including adequate fluid intake. Gantanol is generally well tolerated, with relative freedom from complications; the most common side effects are nausea, vomiting and diarrhea. Frequent e.b.c.'s and urinalyses with microscopic examination are recommended during therapy.

\*Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

## In nonobstructed cystitis due to susceptible organisms

# Gantanol<sup>®</sup> B.I.D. (sulfamethoxazole) Basic therapy

binemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

**Dosage:** Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

*Usual adult dosage:* 2 Gm (4 tabs or teasps.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

*Usual child's dosage:* 0.5 Gm (1 tab or teasps.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

**Supplied:** Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

ROCHE

Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110

# How strong must a tranquilizer be for severe anxiety?

## As strong as Librium® 25 mg (chlordiazepoxide HCl)



The achievement of desired therapeutic results is often a function of the dosage strength as well as the drug's intrinsic action. Thus, when anxiety is *severe*, the 25-mg strength of Librium frequently provides the necessary antianxiety action with a minimum of unwanted adverse reactions. Librium 25 mg is a convenient dosage form for the relief of severe, incapacitating anxiety, specifically formulated to supplement your counsel and reassurance.

### Benefits-to-risks ratio permits higher dosage

For over 13 years, Librium has been recognized for its excellent benefits-to-risks ratio, an asset in the *higher* dosage ranges as in more common clinical applications. Thus, the frequency of dosage with Librium 25 mg can be flexibly adjusted to the needs and response of the individual patient, up to 100 mg daily if required. Total daily dosage for the elderly and debilitated should not exceed 20 mg. When severe anxiety has been reduced, Librium dosage should be correspondingly reduced or discontinued entirely.



basic support  
in severe anxiety  
**Librium® 25 mg**  
(chlordiazepoxide HCl)  
1 capsule t.i.d./q.i.d.



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Relief of anxiety and tension occurring alone or accompanying various disease states.

**Contraindications:** Patients with known hypersensitivity to the drug.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

**Adverse Reactions:** Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

**Supplied:** Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.





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